

POPULAR MANUAL
OF
PHRENOLOGY.

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AUTHOR OF "PHRENOLOGY MADE PRACTICAL," "CRIMINALS, CRIMES, AND
THEIR GOVERNING LAWS," &c.

"Reason and truth should be more regarded by us than vulgar opinion."—CICERO.

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PREFACE.

"True philosophers, who are only eager for truth and knowledge, never regard themselves as already so thoroughly informed, but that they welcome further information from whomsoever and from whencesoever it may come, nor are they so narrow-minded as to imagine any of the arts and sciences transmitted to us by the ancients in such a state of forwardness and completeness that nothing is left for the ingenuity and industry of others"—WILLIAM HARRIS.

In giving my views to the world in "*Phrenology made Practical*," I did so with a strong conviction that society was willing to receive with candour new truths when fairly presented. The great favour the work has met with, not only from the public, but from the press, has far exceeded my most sanguine expectations. This cordial reception of the subject made me anxious to see it more widely disseminated; and perhaps no better means could be employed for that purpose than by placing it in the hands of the people in a cheap and popular form. The aim, therefore, of this work, is to convey a brief, but comprehensive view of Phrenology.

It may be well to notice that the illustrations are from photographs taken to a reduced scale of $\frac{1}{10}$ th the natural size: every care has been taken to render these perfect, so that a correct estimate may be formed of the natural size of each head, and the relative and absolute quantities in position of the various sections of the diagrams, which will be found of great practical value to the reader in arriving at a clear view of the geometrical department of the subject.

To the examination, therefore, of an intelligent public, the work is respectfully committed, by

THE AUTHOR.

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The front view of the Model Head, showing the positions of the mental organs on one side, and the anterior sections of the basilar and coronal regions on the other.



FIG. 111.—Front View of the Model Head

The side view of the Model Head, showing the positions of the phrenological organs.

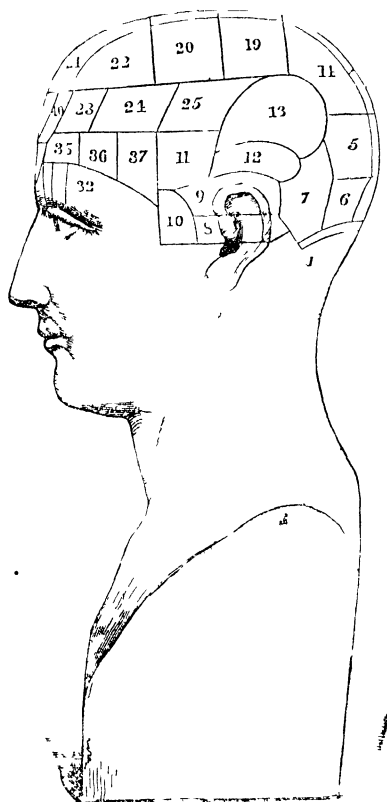


Diagram 2.—Side View of the Model Head.

The back view of the Model Head, showing the positions of the phrenological organs on one side, and the posterior sections of the basilar and coronal regions on the other.

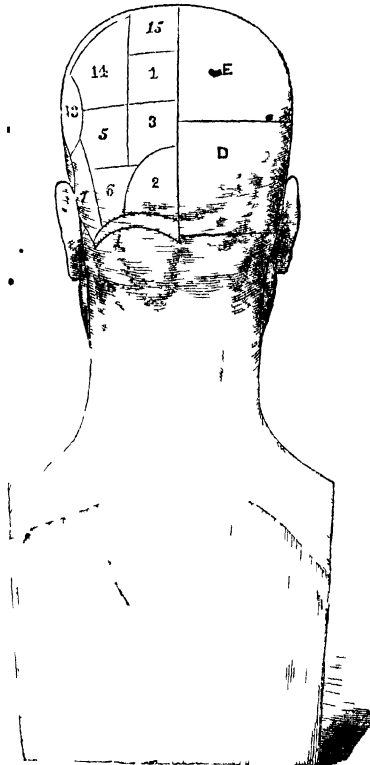


Diagram 3—Back View of the Model Head

The top view of the Model Head showing the positions of the moral organs on one side, and the anterior, middle, and posterior sections of the coronal reg on on the other.

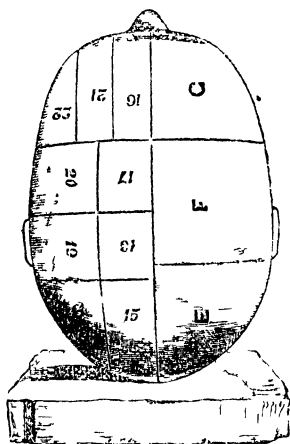


Diagram 1—Top View of the Model Head.

THE NUMBERS AND NAMES OF THE ORGANS.

- | | |
|-------------------------------------|---------------------------------|
| 1 Amativeness. | 21 Imagination. |
| 2 Philoprogenitiveness. | 22 Muscularities (Old No. 15) |
| 3 Inhabitiveness. | 23 Humourities (Old No. 1) |
| 4 Concentrativeness. | 24 Ideality (Old No. 12) |
| 5 Altruism (Old No. 4) | 25 Sublimity |
| 6 Marriage. | 26 Individuality (Old No. 1) |
| 7 Combativeness (Old No. 5) | 27 Form (Old No. 13) |
| 8 Destructiveness (Old No. 6) | 28 Size (Old No. 1) |
| 9 Preservativeness. | 29 Weight (Old No. 1) |
| 10 Alimentativeness. | 30 Colour (Old No. 1) |
| 11 Acquisitiveness (Old No. 8) | 31 Order (Old No. 1) |
| 12 Sensitiveness (Old No. 7) | 32 Number (Old No. 23) |
| 13 Cautiousness (Old No. 12) | 33 Inventativeness (Old No. 1) |
| 14 Love of Approbation (Old No. 11) | 34 Ideality (Old No. 12) |
| 15 Self-esteem (Old No. 10) | 35 Lure (Old No. 1) |
| 16 Benevolence (Old No. 13) | 36 Lure (Old No. 1) |
| 17 Veneration (Old No. 11) | 37 Constructiveness (Old No. 1) |
| 18 Immanence (Old No. 1) | 38 Imagination (Old No. 1) |
| 19 Conscientiousness (Old No. 1) | 39 Conjugation (Old No. 1) |
| 20 Hope (Old No. 17) | 40 Equality (Old No. 1) |

INTRODUCTION.

THE term Phrenology is derived from two Greek words, *Phren*, mind, and *Logos*, discourse. The science treats of the faculties of the mind, and the organs by means of which they are manifested. It has, however, been the subject of great contempt and ridicule, both of the illiterate and the learned, and we do not deny that minds of first-rate order have been employed to connect it with every thing that is foolish, and, as far as possible, to annihilate it altogether. But when we call to mind the bad spirit manifested in all ages against the advancement of truth, we could not expect Phrenology to escape without its full share of abuse and misrepresentation. The remarks of Bishop Berkeley on the reception of new truths on their first announcement, applies with peculiar force to Phrenology. He observes that “effects misimputed, cases wrongly told, circumstances overlooked, perhaps too, *prejudices and partialities against truth*, may for a time prevail, and keep her at the bottom of her well, from whence, nevertheless, she emergeth sooner or later, and strikes the eyes of all *who do not keep them shut*.”

The abuse and ridicule with which Phrenology has been assailed, only betrays a weak cause on the side of those who use them. Men, conscious of integrity, can afford to despise such things. We have no inclination to return abuse for abuse; our only aim is to benefit our own and future generations.

When people speak disrespectfully of things of which they are ignorant, the rebuke of Dr. Halley by Sir Isaac Newton would very fitly apply—" *I have studied these things, you have not.*"

The time, however, has past for truth to be put down by the frowns of authority, or to be put out of countenance by jeers or ridicule. Feelings of personal consideration may prompt some to oppose scientific improvement, others may attempt to impede the onward march of knowledge by appeals to the vague fears of prejudice. But calumny and detraction are now received at their true value, and form the gauge by which to estimate the mental and moral worth of the individuals who employ them. Such weapons are repudiated by a good cause, and they fail to aid a bad one. Such, however, is the blind regard of some persons for authority, that they reject whatever is not approved by those in whose judgment they place implicit reliance. But it should be borne in mind that the opinion of a man, or any class of men, however eminent, is of no practical value on a subject which they have not studied.

"At the commencement of the seventeenth century appeared one of those master-minds that arise at different stages of human advancement in intellectual progress. With his searching glance he detected the absurdities of the schoolmen, and exposed them with a vigorous mind and unsparing hand. He dethroned the Aristotelian idol, which for ages had received the blind fealty of a world; and fortunately for science and humanity he attempted not to substitute an idol of his own. This great man was Lord Bacon, who pointed to Nature, and observed that man was her servant and interpreter, and knew nothing but what he derived by experience on the order of her phenomena; and maintained that all our knowledge must be acquired by observation.

“To observe facts is, then, the first great business of the investigator. Facts may be divided into the presented and the produced. The first being such as nature offers to our notice without any interference of our own; the second being such as occur in consequence of our putting in action causes and agents over which we have control. Those last named are usually called experiments, and then production and observation Lord Bacon terms ‘asking questions of Nature.’ Thus the increase of a child from infancy to manhood is a fact presented to our observation. But the conducting of a chemical analysis, to determine that a certain material contains properties, is a produced fact or experiment. It must, however, be borne in mind

that if facts are well scrutinized and verified, they are of equal value whether presented or produced. But the presented facts are almost the only ones employed in phrenological investigation.

“Observation, then, being the only true method of laying a foundation for the discovery and establishment of truth, we should dismiss from our minds all preconceived notions of what *should be* or *might be*, and try carefully to ascertain what *is*.

“The fact that ‘knowledge is power’ is forced upon our notice daily, and human happiness is enhanced in the ratio that knowledge is brought to bear upon the practical affairs of daily life. Thus our increased knowledge in chemistry, in agriculture, and mechanical improvements, confers more power to enhance and cheapen the comforts of life. So it is with all other kinds of knowledge, and as it increases from age to age, human happiness will be proportionally multiplied. The inhabitants of those nations who know the most of the laws which regulate and govern the fitness of things, (other conditions being equal,) can

accomplish and enjoy the most. Ignorance is the greatest cause of human weakness and wickedness. Hence, to enlighten man in a knowledge of the laws of things so reduced to system in science, is the only sure way to reform and perfect him.

“The wise men of ancient Greece deemed self-knowledge the most important, and the maxim, ‘KNOW THYSELF,’ was written in gold upon the Temple of Delphos, as a beacon for unborn generations. Self-knowledge is our knowing the most efficacious means of increasing the conditions for prolonging life, health, and happiness. It points out our natural capabilities, our virtues and vices, and liabilities to err, and those spheres and occupations in which we can and cannot succeed. In short, to know ourselves perfectly, is to know the laws which regulate every condition of happiness and every cause of suffering. And to practice such knowledge is to live in obedience to those laws that regulate every department of our being.”—*Phrenology made Practical*.



POPULAR MANUAL OF PHRENOLOGY.

HISTORY OF PHRENOLOGY.

THE foundation of Phrenology was laid by Dr. Gall, a physician of Vienna, who was born at Teufenbun, in Swabia, March 9th, 1757, and who died at Paris, August 22nd, 1828, aged seventy-one. It appears that from an early age he was very observant, and was struck with the fact that each of his brothers and sisters, together with his companions in play, and schoolfellows, was distinguished by some peculiarity of talent and disposition.

The scholars with whom Dr. Gall found it most difficult to compete were those who committed to memory with great facility. He might surpass them in original composition, but they surpassed him in verbal memory, and therefore gained honours which he could not win. He observed that his schoolfellows so gifted had prominent eyes. On entering the university he directed his attention from the first to those students whose eyes were prominent, and found that they excelled in learning rapidly by heart, and giving correct recitation, although many of them were by no means distinguished for general talent. But the "ox-eyed" students, as they were called, always bore away the palm whenever the acquisition of words was concerned. Gall could not believe that this coincidence of the two circumstances was entirely accidental.

From this period, therefore, he suspected that they stood in an important relation to each other. After much reflection, he conceived that if memory for words was indicated by external sign, the same might be the case with other intellectual powers. From this time all individuals distinguished by any remarkable talent became the object of his particular attention. By degrees he conceived that he had found external characteristics which indicated a disposition for painting, music, and the mechanical arts. He observed that a young man, an acquaintance of his, when rambling in the woods with him, never lost his way, while Gall himself frequently did. This young man had two very marked prominences on his forehead, just above each side of the root of his nose. Subsequent observation convinced Gall that persons so distinguished acquired with ease a knowledge of localities, and that they could find any place where they had been before almost instinctively, however obscure and complicated. He became acquainted also with other individuals remarkable for determination of character, and he noticed a particular part of their heads to be very largely developed, which suggested to him *the idea of looking to the head for signs of the moral sentiments*. However, he never conceived for a moment, as has been erroneously represented, that the skull was the cause of this difference of talents. From the first, he referred the influence, whatever it was, to the brain. He therefore abandoned every theory and preconceived opinion, and devoted himself entirely to observation of nature. Being a friend of Dr. Nord, physician to a lunatic asylum in Vienna, he had frequent opportunities of making observations on the insane. He visited prisons, and seats of justice, and wherever he heard of an individual distinguished in any particular way, either by remarkable endowment or deficiency, he studied the developments of his head. In this manner, by an almost imperceptible induction, he concluded

that particular mental powers are indicated by particular configurations of the head.

In every instance, when an individual, whose head he had observed while alive, happened to die, he used every means permitted to examine the brain, and frequently did so. He found that, on the removal of the skull, the brain covered by the *dura mater* presented a form corresponding to that which the skull had exhibited in life. Dr. Gall did not, as many have imagined, first dissect the brain, and pretend by that means to discover the seats of the mental power; nor did he, as others have conceived, first map out the skull into various compartments, and assign a faculty to each, as fancy led him to conceive the part appropriate to the power. On the contrary, he first observed particular talents and dispositions, and particular forms of head. He next ascertained, by the removal of the skull, that the figure and size of the brain are indicated by the external form of the skull. It was only after these facts were determined, that the brain was minutely dissected, and light thrown upon its structure.

For the first time, Dr. Gall delivered lectures on his discoveries, at Vienna, in 1796; but he naturally failed to give system to the facts which he had discovered.

In 1801, John Gaspar Spurzheim, also a German, became the pupil of Gall; and in 1804 was admitted as his partner. Spurzheim greatly improved the nomenclature and classification of the organs which Gall had discovered, and also contributed much towards giving a philosophical account of the anatomical structure of the brain.

Spurzheim's partnership with Gall ended in 1813, and in 1814 Spurzheim visited England, and lectured in the principal cities and towns. During his visit to Edinburgh he had the good fortune to make a convert of Mr. George Combe, a gentleman who has since distinguished himself as an able

and eloquent expounder of Gall's facts. In 1817 Spurzheim returned to Paris. In 1824 the lectures of Gall and Spurzheim at Paris were prohibited by an order of the government. Spurzheim again visited England in 1825, where he afterwards spent most of his time, until June 20th, 1832, when he sailed from Havre, and arrived at New York August 4th. He remained in New York until the 18th, when he proceeded to Newhaven. On the 16th he left for Hartford, and from that city he went to Boston, where he arrived on the 20th. He gave a course of lectures at Boston, and another at Cambridge. This was the last labour of Spurzheim in the cause of science. A slow, continued fever, not at first considered dangerous, finally proved fatal, and he died at Boston, Nov. 10th, 1832. No man was more sincerely lamented. To the immortal honour of Boston, the most distinguished tokens of love and regard were extended to him while living, and the highest testimonials, grateful reverence, followed him to his grave. The beautiful monument erected at Mount Auburn to his memory, is but an emblem of the pure affection with which he was cherished by his friends. His burial may be forgotten, but the names of Gall and Spurzheim are immortal. They must always be associated with principles that will be known and appreciated while science has a temple or a devotee on the earth.

GENERAL PRINCIPLES OF PHRENOLOGY

It is now acknowledged as an unquestionable truth, that all the manifestations of the mind, including the feelings and the passions, are dependent upon the configuration, quality, and healthy condition of the material instrument—the brain. Phrenology does not teach that the brain is the mind itself, but its agent. We take for granted that mind is a spirit complete as a unit in itself, and we all know that this spirit

makes known its thoughts and feelings by means of the brain as an instrument to come into union with the external world.

The mind being the innermost spring of our nature, none of our faculties are capable of perceiving its incorporeal existence. As a matter of sequence, what our faculties cannot perceive they cannot directly act upon. Therefore, when people talk of improving the mind, it must be the physical instrument or agent of the mind to which their language refers. The spirit is only under the influence of Him who breathed into dust the breath of life, creating thereby a living soul. To improve implies superiority, but no one will arrogate the power of improving souls. Education needs not so deep an influence. All that man can do is to improve the agent, to render more fit the earthly tabernacle of the soul, and this we may do and do well. No one regards the eye itself as sight; we all know that it is the agent of sight. What are termed the nerves of sensation are the medium through which all external impressions are conveyed to the mind, just as a message is sent by the electric telegraph from Liverpool to London. But before the mind can receive correct information through those nerves they must be in a proper condition to perform their true functions, and in the degree that they diverge from that condition the mind receives imperfect messages. These nerves have no innate sensation in themselves, any more than the electric wires of the telegraph. If we cut the nerve that communicates between the mind and the hand or foot, all sensation is lost to the part, and it might be put into hot or cold water without the mind being conscious of the act. The eyes and ears are the mediums through which the mind sees and hears, and before the mind can see and hear perfectly, their structure must be in strict obedience to the laws of geometry, as the powers of vision and hearing are regulated by those laws in accordance with the quantities in position

required for perfect vision and hearing. If the sight be imperfect, the optician makes the lens of the spectacle to possess the exact geometrical quantity that will bring the medium of vision into correct relation with the optical law; and in the degree that the eye is in perfect harmony with the optical law by which it is governed, the mind has a correct medium to look through. The organs of hearing are also constructed in perfect accordance with the laws of quantity, and bear the same relation to the geometrical laws which govern acoustics, as the eye does to those laws which govern optics.

Having stated that the brain is the organ or instrument of the mind, we may now proceed to observe that it is found by long experience and observation that, before we can have a perfect manifestation of all the faculties of the mind, a perfect instrument is as necessary for that purpose as perfect eyes and ears are for correct vision and hearing; and that every manifestation of mind is as strictly in conformity with the laws of geometry (all other conditions being equal) as those which govern seeing and hearing.

Phrenology teaches that the brain is composed of a number of organs. Admitting the first principle, that the brain is the organ of the mind, it seems impossible to avoid the second. For if the brain is the organ of the mind, how shall we account for the superiority of man over the lower animals, unless we admit that he has more and higher organs of the brain? In examining the brains of animals, we find them more complicated, and containing additional parts in the ratio that the animal manifests instinctive sagacity,

Now, the human brain is composed of three distinct orders of mind instruments, which are, the propensities or instincts that we possess in common with the lower animals, the moral feelings and the intellectual faculties. The human mind, however, manifests moral feelings and intellectual faculties that

are not manifested by the lower animals, and we find that the difference in the configuration between the brain of brutes and that of a proper human brain, is as distinctly marked as the difference between the mental and moral manifestations of a highly gifted man, and such manifestations in brutes.

In the degree (all other conditions being equal) that the propensities that we have in common with the lower animals preponderate in an individual over the moral and intellectual faculties, the desire for merely animal gratification will be increased, and the individual will seek a sphere which affords objects for that purpose. On the other hand, an individual in whom the intellectual and moral faculties predominate over the animal propensities, will be induced to seek a sphere that will afford gratification to his predominant qualities; and he could no more find pleasure in the sphere that would afford the highest enjoyment to the individual with an excess of the propensities over the mental and moral qualities, than that individual could find enjoyment in the sphere of high mental and moral refinement. Indeed, such a state of things would be as incompatible to his ideas of enjoyment, as the philosophy of Lord Bacon would be to the comprehension of a mental idiot.

Some persons are great geniuses in some things, and almost idiots in others.

Some are insane on one class of subjects, and perfectly rational on all others.

It is a fact in nature that mental idiotey is caused by a defect or malformation of the anterior lobe of the brain, by which the mind is deprived of its proper instruments for the manifestation of its mental powers. The mind also requires a proper instrument for the manifestation of its moral powers, and it is found by long experience and observation that the coronal or upper part of the brain is the region of that instrument, and that we can no more have full or correct manifestations of the

moral feelings without a proper development of their instrument in a healthy and cultivated condition, than we could have a full and perfect manifestation of all the mental faculties with an imperfect instrument, in its organic structure, in an unsound and uncultivated condition.

There may be persons who may be startled by the subject being placed in so strong a light, but a moment's reflection will show them that everything in nature acts in obedience to the inevitable laws which govern the fitness of things, and that no phenomena can be manifested only in strict obedience to those laws. The mind cannot see without eyes, hear without ears, or become conscious of external impression without the nerves of sensation. Seeing, hearing, tasting, smelling, and feeling are acts of the mind as certain as those of mental and moral action; and the former can no more perform their true functions unless their instruments are in perfect condition, than we could have perfect mental and moral manifestations with imperfect mediums.

In dreaming some faculties are active and the rest asleep.

It is easy to account for these phenomena on the principle that the brain is constituted of a number of organs, which are possessed in different degrees by different persons of different ages, and that the lower animals possess some of them and are destitute of others. One organ may be diseased, and the rest sound; one may be asleep or at rest, and the others awake or active. If this phrenological principle be denied, there is no means by which to explain these phenomena. But we have abundance of proof resulting from observation in support of a plurality of organs.

Phrenology teaches that the size of an organ indicates its power of manifestation, other conditions being equal. By other conditions being equal, we mean temperament, quality of brain, the general organization, the condition of the nutritive organ,

the state of health, the degree of excitement under which the different faculties act, education, age, &c. In consequence of differences in these particulars, there are differences in mental manifestation. So in testing Phrenology, as well as in applying its principles, it would be absurd to give an opinion without such knowledge. For instance, suppose we select two persons, one having a large brain, the other with a small brain, and other conditions being equal, we should not hesitate in declaring that the person with the large brain would manifest the greater power and ability. But it must be explained, a man with a small brain and a very active temperament, may by cultivation rival a man with a large brain, but of indolent habits, or dull temperament. Facts place this proposition beyond doubt.

Size cannot be considered irrespective of its conditions; and we admit no argument against us of any avail unless each and all of the conditions are fairly included. Size is the great desideratum, except it be excessive, resulting from malformation. We say this of the great mass of men, excepting increased size from disease, which can never be made an argument against the principles we have advanced.

In these conditions we only express the simple laws of relation which pervade all nature; alike in physics and metaphysics; and the same in every exact or speculative science.

GENERAL PRINCIPLES OF THE HUMAN CONSTITUTION.

Having stated that the mind requires for the full manifestation of its power a proper brain instrument, in a healthy and cultivated condition, it is important to bear in mind that an individual may possess a properly constructed brain, but, owing to other conditions of his constitution not being in correct relation to it, the manifestations of the mind will be correspondingly affected. Now, in the formation of all bodies certain elements enter necessary to their structure

and use. This is true of man as a being, and his body in all its parts. But before we can have harmony of functions in all the departments of the physical constitution, we must have symmetry of parts. If one organ be too large, it takes up more than its proportion of the vital energies, diverts to itself more than its share of nutrition, and thus deranges the harmony of the whole ; for in the normal state the vital energies are universal, equal, and all-pervading ; the strength is distributed to each viscus alike, and the whole organism is made true to its design, without dissimilarity of parts or excess of functions. The size of the organ bears an exact relation to the amount of vital energy necessary both to its reproduction and function. Now, if an organ be too large, more than its proportion of vital power is exhausted from the other organs, or, may be, from the functional power of the organ itself. Hence it is self-evident that symmetry of organism is essential to equilibrium in its growth or function. In a badly-formed organization the vital powers are ever laboring to equalise the functions of the parts. By adhering strictly to this incontrovertible principle of physiology, we have a guiding law which will enable us to proceed in the investigation of the various mind phenomena, as manifested by different individuals, by the same scientific method that all the positive sciences are treated.

The human constitution is composed of a vast number of organs, intimately related to each other, and when every part and condition of the body is in complete order all act together in the most beautiful and perfect harmony. Notwithstanding the exalted nature of man, he is subject to the same laws that regulate the rest of the animal and vegetable creation.

Moral action, intellectual action, and physical action have their seats and instruments in different parts of the human system, and those parts are essentially connected by sympathy and other ties more mechanical and obvious. One of them

being injured or benefitted, the others are affected in a corresponding manner—deriving their being and sustenance from the same source, and serving as elements of the same individual person, each of whose parts is necessary to the integrity and perfection of the whole.

That this may be fully understood, it may be observed that the morals of every individual depend on the condition of that part of his brain through which the moral faculties are manifested ; the intellectual, on the condition of his intellectual organs ; and the other, on the condition of his physical powers. The human body is a very complicated apparatus. It consists of many organs, which are made up of other organs, each performing its specific function ; but these organs, instead of acting every one for itself alone, act also for each other individually, and collectively, and are united in a system of function and sympathy. The condition of one organ, therefore, whether sound or unsound, influences and modifies that of many others. If it be a principal organ, it influences the whole machine. There are three great sets of organs which, while they are intimately and indispensably connected with each other, control all the rest and assimilate their condition in no small degree with their own. These are the chyle-making or digestive organs ; the blood-making and blood-circulating organs, consisting of the lungs, blood-vessels, and the heart ; and the brain, spinal cord, and nerves, which are the instruments of intellect and feeling, and are essential to voluntary motion. These three sets of organs have been said to control all the others ; and this they do by mutually controlling themselves—by exercising such reciprocal influence as to be all at the same time somewhat assimilated in condition. They are as necessary to each other as they are to the whole ; if one of them is deranged in its action, the two others suffer immediately, and all the rest of the system in its turn. If the

one is diseased, its healthy influence, which is indispensable to the well-being of the two other sets of associated organs, is withheld from them, and they also fail in their actions as well as all their sound and sustaining sympathies. The chyle is deteriorated. This proves a source of further injury to the brain, which, unless it is supplied with well-prepared blood, is neither itself in good condition nor capable of contributing to the health and efficiency of other parts of the body. It cannot prepare from a scanty and bad material the substance or agent of its own influence, whatever it may be, in sufficient quantity and sound quality. The general mischief arising from a primary affection of either of the two other sets of controlling organs is equally demonstrable, and depends on similar principles. But it is needless to dwell longer on this subject: to every physiologist it is already familiar; it is known to him that out of chyle of bad quality or deficient in quantity, a sufficient amount of good blood cannot be prepared, that if respiration be defective the latter fluid cannot be duly vitalised, and that if the heart is enfeebled it cannot throw the blood with requisite force into every part of the system.

In the investigation of mind phenomena, the physical man has been too much overlooked, and we may exclaim, with Dupaty, on seeing the magnificent anatomical museum at Florence, "Philosophy has been in the wrong not to descend more deeply into physical man: there it is the moral man lies concealed."

We have called attention to the importance of keeping in view the physiological principle that the harmony of functions depends on the symmetry of form. That a clear idea may be formed of the vast importance of this principle, and the way that the mind is influenced in its manifestations by the degree of relationship that the three great vital regions bear to each other in size, we have introduced two figures, to show the three organic regions, which are denominated the abdominal, the thoracic,

and the cephalic ; also to show the difference between the male and female form—the male—figure 5—being broadest across the shoulders, while the female—figure 6—is broadest across the pelvis.



FIGURE 5



FIGURE 6

The Abdominal Region.—This region lies below the diaphragm or waist, extending down to the lower extremities, and embracing the several organs of digestion, the liver, spleen, pancreas, bladder, kidneys, and the organs of generation. In these organs several of the most important functions are

performed; and nearly all those of organic life. To these most of the external and physical stimuli are constantly applied. It is by over-acting these organs that nearly all the habits of man are formed, such as intemperance, gluttony, and licentiousness; it is here the great majority of diseases, both acute and chronic, manifest themselves.

Perhaps we can use no better word than *appetite*, when we wish to express the result of this region being too large—appetite which is accompanied with a tormenting longing and hankering after something to stimulate and satisfy. We do not now speak of disease, but refer to the natural consequence of unequal size in a healthy state. The base of the brain and this region have a close sympathy; at all events, in the human subject, if these organs be too large, the lower propensities are the most active of the cerebral organs. They draw away the natural action of the other organs, and use the innervation thus stolen in fostering the lower vegetative appetites. If too small, they derange the thoracic and cephalic organs by second causes, that is, they withhold the elements of innervation and nutrition. When harmoniously developed, the secretions are appropriate, the tone of the system equal, the health firm, and the mind free.

The Thoracic Region —This region is bounded by the dorsal vertebrae, the ribs, the sternum, the diaphragm, below, and the throat above. It embraces the heart and lungs, and is the centre of the functions of respiration and circulation—the two great forces of the organism on which depend animal heat, and motion.

If this region be too large, the brain is overcharged with blood, partakes partially of the nature of muscle, suffers mere physical action, gives out volition for muscular motion rather than elevated mental phenomena, sinks in the tone of its sentiments and intellectual functions, and is subject to the demands of the voluntary organs. If the region be too small, then the system, with the brain, is poorly nourished, the blood

is not sent efficiently into the distant organs, the cuticle is dry and ill-odored, the digestion is obstructed, and physical and mental imbecility succeed. The man is a cipher while living, and his life is short. An average or symmetrical development of this region gives a business-like, steady, strong, and able constitution, and supports the brain in healthy action.

The Cephalic Region.—The head constitutes this region, containing the brain, the medulla oblongata, the roots of the cranial nerves, the face, and the blood vessels supplying these parts. In this region the mental phenomena all occur, the great centre of sensation is located, and the spirit is enthroned. From this goes out all the forces of innervation, and here are the principal muscles of expression.

When this region is too large for the other two regions, on which it so much depends for its nutrition and growth, its functions are too intense and rapid, changeable, and self-exhausting; or, from size induced by unnatural development, they are languid, weak and inefficient. Now, this is an important fact. A very large head, where the organism is badly proportioned, is a sure sign of a weak character. When the brain is too small, the character has no range of elevation, but is made up of little traits and actions. But when the brain is large and in fine proportion with the other regions, and the temperament or the texture of the physical system fine and firm, the character will be equal and harmonious.

The organs, however, which form the human constitution are so numerous and complicated, and the offices they perform so different, that it would be impossible to form a correct idea of them without classing together those which perform kindred functions, and considering them as distinct and partially independent systems. Thus, the bones are denominated the osseous system, and constitute the frame on which the other organs are supported. But the bones cannot move without the agency of

the muscles. These constitute another class, denominated the muscular system. Those who are not familiar with the anatomical expressions will have a perfect idea of the structure of the muscles, when they are informed that all the lean parts of the flesh are entirely composed of muscles—the parallel fibres which extend from one bone to another; and, possessing as they do the power of contracting with great force, they are capable of moving the bones from one place to another, as far as the tendons will permit. The principle of contractility of muscles is of great importance, since every motion of the body and sign of life which we are capable of making are made by the contraction of the muscles. Not only are the movements of the body, the pulsation of the heart, the circulation of the blood, and the action of the stomach and intestines dependent upon the contraction of the muscles, but also all the manifestations of the mind are dependent upon muscular contraction. This dependence of the mind upon the muscles is illustrated in the case of persons who have been in a trance. Although conscious of what was going on around them, yet they could give no sign of consciousness.

The muscles are of different sizes and forms, according to their situation, and to the force it is necessary to exert. But notwithstanding that they are absolutely necessary to produce motion, yet they cannot move themselves; they are excited to action by the agency of some part of the nervous system, denominated the voluntary and involuntary nerves of motion.

The nerves of involuntary motion stimulate and excite all the muscles that are independent of the will, all that are concerned in digestion, circulation and respiration. These functions proceed incessantly from the very commencement of our animal existence to the last moment of life, whether we are asleep or awake, without our being conscious of it, and without our being able to prevent it by any act of the mind.

The nerves of voluntary motion all originate in the brain, and are under the control of the will. They are the messengers which convey to the muscles the decision of the mind. They, however, cease to act when separated from the brain, and are evidently mere instruments of communication between the brain and the muscles. Whenever the mind determines, the voluntary nerves receive an influence from the brain, and quick as lightning convey it to the appropriate muscles, which instantly contract and produce the action. Thus, if we wish to speak, the brain conveys, through the medium of the voluntary nerves, an influence to the muscles of the tongue, throat, lips, &c., and instantly they contract and produce the required sound.

The nerves of the five senses convey impressions to the brain from the external world. The optic nerve conveys impressions of light, the auditory nerve of sound, the gustatory nerve of savours, and the olfactory nerve of odours; while the nerves of touch extend from all parts of the body and head, and an infinite number of exceedingly minute branches of nerves convey to the mind impressions of cold, heat, pain, and mechanical pressure.

Thus we have seen that the bones cannot move unless acted upon by the power of the muscles, and the muscles are incapable of acting until they are excited by the nerves, while the nerves are dependent upon the brain, and the brain is excited by the five senses, which in their turn are stimulated by the external world.

These three classes of organs—the muscles, the bones, and the nerves—constitute the most essential part of the human constitution. All the other systems or organs are merely auxiliary to these, and conduce to their nourishment.

When all the systems which compose the human constitution are in perfect form, size, health and vigour, the individual may be said to possess a balanced constitution. All will admit that

if we could find a man in whom all the qualities of mind and body were harmoniously developed, we should then behold a being who would realize, humanly speaking, our idea of perfection. But a perfect human being, mentally, morally, and physically, is more imaginative than matter of fact. That all men fall far short of this standard is a truth which religion and experience alike confirm ; but some approach nearer to it than others. The question, then, to be considered in estimating the qualities of individuals, is not whether any one exists whose mind and body are in perfect relation to each other, but in what relative degree is the divergence from the harmonious balance in the type which we have supposed ?

THE SIGNS OF THE TEMPERAMENTS

The Lymphatic is distinguished by the quantity and softness of the flesh, pale skin, mostly free from hair, the hair fair or flaxen, dull and inexpressive eyes ; it is supposed to result from a predominance of the glandular and assimilating organs, and produces a general sluggishness of action in which the nervous system participates.

The Sanguine is believed to result from a predominance in the Thoracic viscera, the Heart, Liver, and Lungs. Its indications are a florid skin, blue eyes, chestnut or red hair, moderate plumpness and fullness of flesh. Its characteristics are, love of physical action, change and novelty. The sanguine man is not to be depended on ; he may mean what he says, but cannot resist pleasure ; hence he breaks promises ; delays and neglects his engagements.

The Fibrous is indicated by strong marked outline of features, dark sallow skin, black hair ; it is in connection with a great development of the muscular and fibrous portions of the system, and imparts to the character endurance.

The Nervous depends upon an excess of size and activity in

the nervous masses of the system, and especially of the brain. This temperament is often accompanied with delicate health, which results as much from a deficiency in the Thoracic development, as from the positive strength in the nervous system; its external signs are a thin skin and small muscles; blue or *hazle* eyes, which have a peculiar sparkling look; and brown hair; it produces great sensibility, and it gives warmth and energy to all that is said and done; but the strength soon becomes exhausted, and is incapable of long continued exertion from its intensity.

- It very rarely occurs that there is not a mixture of the temperaments in each individual; in fact there should be relative proportions to constitute harmonious organization, as they will, of course, modify each other. The nervous with the sanguine produces mental as well as physical activity. The fibrous added imparts more endurance; and the lymphatic, that desire for easy enjoyment which is necessary for all the system to recruit and regain its power for exertion. The temperaments are fully explained in "*Phrenology made Practical*."

THE BRAIN.

The brain has always been a subject of much learned discussion; but until the time of Dr Gall, the little that was known concerning it was of no material use, and only tended to distract the mind of those medical students who endeavoured to understand it.

The ancients entertained different opinions regarding the use of the brain; some believed, or rather suspected, that the brain was the seat of the mind; others, with Plato, considered the heart as the seat of the passions, and the brain the habitation of the higher and nobler sentiments. Hippocrates regarded the human brain as a sponge, which imbibed the moisture of the

body. Aristotle, on the contrary, viewed it as a humid mass, intended to temper the heat of the body. Descartes believed that the pineal gland, a part about the size of a pea, at the centre of the brain, was the habitation of the mind. Some, again, pretended to think that the brain was merely to balance the face, and prevent it from inclining too much forward, and that the mind resided in every part of the body.

Dr. Gall's discovery threw great light on the anatomy and physiology of the brain, and scientific men have given names to many parts, expressive of their functions.

The brain and spinal cord are in two equal and symmetrical halves, called hemispheres, one of which is contained within the right side of the skull, and the other in the left. Every essential part that is found upon one hemisphere is found in a corresponding place on the opposite. Thus phrenologists have discovered about forty organs of mind in one hemisphere, and a corresponding number of similar organs on the other side; thus upwards of forty nerves proceed from one hemisphere of the brain and spinal cord to different parts of the body, and an equal number proceed from the other hemisphere in a similar manner. This explains why nervous diseases sometimes affect one side of the face and body, and not the other.

The division of the great organs of mind into hemispheres, corresponds with the fact that all the organs of the body that obey the mind are double; so also are the organs of the senses that carry information to the mind. Thus we have two hands, two feet, two eyes, &c. The body, and particularly the face, may therefore be said to be divided into right and left hemispheres; and in this is a good illustration of the manner in which the brain is divided. The line which divides the right from the left hemisphere is called the *median line*. The commissures of the brain are parts that extend across from one

hemisphere of the brain to the other, and are evidently intended to produce unity of action between them; so that although the great organ of the mind is double, the operations of mind are single; and notwithstanding the organs of sense are double, the sensations are single. One side of the head cannot be angry while the other is pleased; one side cannot delight in music while the other is averse to it; but both hemispheres act together, as if they were one, which could not possibly be the case if they were not intimately united by means of the commissures.

. Phrenology was not discovered by dissection of the brain; but by observing the agreement between the dispositions of men and the lower animals, and the forms of their heads. The brain was afterwards dissected, and its structure examined with great care, in the hope that it would shed some new light upon the subject. Anatomy has been of little use to Phrenology; we are indebted, however, to Phrenology for much useful knowledge concerning the anatomy of the brain. So far as the anatomy of the brain is understood, it is in beautiful harmony with Phrenology; but it is a great mistake to suppose that Phrenology is dependent upon anatomy for evidence by which to establish its truth. Those opponents who object to Phrenology, because it cannot be proved by dissection, evince an unpardonable ignorance of the subject. Most people cannot understand why so many medical men, who are supposed to know the nature of the brain, disbelieve in Phrenology: the truth is, they are not on that account better able to judge concerning the truth of Phrenology than those who are entirely ignorant upon that subject. Any man who is capable of perceiving the forms and sizes which the head assumes in different individuals, and comparing their developments with their conduct, can judge of the truth of Phrenology as well as the most eminent medical professor.

The different parts of the brain, instead of receiving names expressive of the functions which they perform, have been named according to the shape which they generally assume. This accounts for the strange and unphilosophical terms which are used by writers on anatomy, and which are only calculated to discourage the common student. Indeed, few medical students think it worth the trouble to learn the details of the anatomy of the brain as it is commonly taught, as they soon ascertain that it is of no practical use, consisting of merely learning the locality of parts, the offices of which are unknown, and even un conjectured, and simply resembling in form certain familiar objects from which they derive their names.

For a full description of the brain see "*Phrenology made Practical.*"

. THE SKULL.

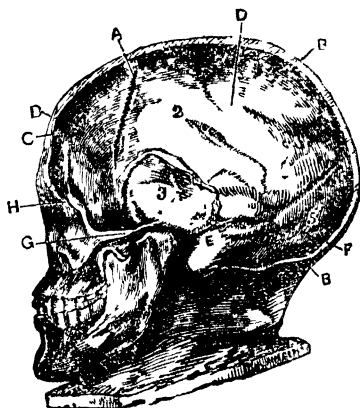


Diagram 7.—The Skull

B, B, B, the scalp which covers the skull, C, the centre of ossification of the frontal bone, D, the centre of ossification of the parietal bone, E, the mastoid process, F, the occipital process, G, the centre of zygomatic arch, H, the superciliary ridge of the frontal bone.

THE reader should make himself acquainted with the general anatomy of the skull, otherwise he will be at a loss to understand the reference occasionally made to its particular parts. The bones of the skull-cap, the cavity which contains the brain, are as follows:—1, the frontal bone, which forms the forehead; 2, the two parietal bones, which lie between the frontal and occipital, and form the sides and top of the head; 3, the two temporal bones, which lie in the temples, and form the lower parts of the sides of the skull; 4, the ethmoid bone, which lies in the base of the skull, immediately over and behind the nose; 5, the occipital bone, which forms the lower and back part; 6, the sphenoid bone, which lies between the ethmoid and occipital bones, and supports the centre of the brain. These bones are united by seams or sutures. A, the coronal suture runs between the frontal bone and parietal bones, the lambdoidal suture between the parietal and the occipital, and the sagittal suture between the two parietals, along the centre of the head, stretching from the coronal to the lambdoidal suture. The temporal sutures join the temporal bones to the parietal, occipital, and frontal bones. The sphenoidal and ethmoidal sutures connect these two bones to each other and to the rest. It is necessary to know the place of the sutures, as they frequently produce ridges that are mistaken for developments of brain. They may, however, be easily distinguished by their angular, abrupt appearance. There are also several processes or prominences of the skull that are frequently mistaken for phrenological organs. One of these is the mastoid process, just behind the ear. This is sometimes mistaken for combativeness, but it is below that organ. Another is the occipital spinal process, situated below philoprogenitiveness, which is frequently taken for this organ. This process, however, is a good guide to the correct situations of philoprogenitiveness and amativeness; the former is immediately above

it, and the latter on each side, between it and the mastoid process. By drawing a curved line, as seen in the model head, from the occipital to the mastoid processes, you can correctly ascertain the projection and depth of the occipital swelling, which will enable you to estimate the size of the cerebellum.

ON THE GEOMETRICAL AND NATURAL LAWS WHICH GOVERN ORGANIZED FORMS IN THEIR FUNCTIONAL QUALITIES.

After the foregoing brief notice of the temperaments and brain, we shall now direct our attention to the laws which regulate human nature mentally, morally, and physically. We have devoted more than twenty years to the investigation of this department of the subject. In the course of that investigation we found it necessary to make ourselves acquainted with the habits and peculiarities of the lower animals. We directed our attention to nature in her humblest organized forms, and traced, step by step, to man, the noblest of God's works. Through all this labour and study we perceived certain forms of brain, gradually ascending higher in geometrical proportion, in the exact ratio that the animal advanced in the scale of intelligence, and that each species had a form of brain in strict accordance with its natural characteristics. From this we were led to observe that the brains of human beings had each a peculiar shape, some resembling in a degree the brains of various animals. This led us to the fact that, as the brain of an individual approximated in form to that of any particular species of animal, his conduct was distinguished by the natural peculiarities of that animal.

It is, however, a remarkable fact, that a human being seems to pass through every gradation of animal existence. In the progress of formation before birth, the heart, in the first instance, is a mere pulsating vessel, like that of an insect; then a sack, like that of a fish; then two sacks, like that of an

amphibious animal ; and then a regular double heart. So that in the formation of the human brain, it presents stages analogous to the brains of fishes ; then to that of birds ; then to that of mammals ; and it finally becomes, by the addition of new parts, a human brain. But if in the progressive development of the brain it should be stopped before it has arrived at the advanced stage of a proper human brain, the child is born with an imperfect mind instrument, and if proper means are not taken to develop those parts that are the peculiar characteristics of a proper human brain, the child grows up a low, grovelling animal, and most probably will become one of the worst of criminals.

The geometrical law which governs beauty is definite ; and although a practical knowledge of it is difficult to acquire, yet the sculptor, by slow degrees, discovers that when certain geometrical quantities are placed in correct relation to each other, a beautiful face or figure can invariably be produced. When the sculptor has thus determined the quantities that constitute a beautiful face, he has a rule or guiding law by which to work and judge, and he is able to detect in a face or figure, any part that is not in strict harmony with the law of quantity that governs beauty. So it is with the configuration of the head. In the degree that a head diverges from those quantities that are requisite to constitute a perfect head, the divergence from harmony is as readily detected as it is in the face by a sculptor.

By long experience and observation, I have found that the best type of brain for the manifestation of the faculties of the mind, is composed of equal quantities in each section of the brain. For the purpose of illustration, we will take a head without fractions, (see diagram 8.) In the first place the opening of the ear stands in relation to the eyebrow at an angle of 25 degrees. It may, however, be observed, that I have

invented a mathematical instrument, termed "The Phreno-physiometer," with which I determine the absolute and relative quantities in position in the different regions of the brain. The angle of the ear in relation to the eyebrow is termed the basilar phreno-metrical. This angle is the datum from which I determine the geometrical configuration of the head, and from which I infer the particular type of brain of each individual, and to what class it belongs—whether it be that of the murderer, the freebooter, the petty thief, the swindler, or the mental and moral class. Hence the classification of human beings, whether juvenile or adult, will be found of great practical importance in the treatment of criminals, as well as in conducting the education of youth.

For full particulars of the Phreno-physiometer, see "*Phrenology made Practical*."

I have observed that the basilar phreno-metrical angle is the datum from which I determine the geometrical configuration of the head, the particular type of brain of each individual, and the class to which it belongs. That a full and clear idea may be formed of the importance of this angle in estimating character, I will as briefly as possible explain its nature and bearing. It has been found by experience and observation, over a long period, that the human ear, to be in its correct position, should stand at an angle of 25 degrees in relation to the eyebrow. The opening of the ear is on a line with the base of the brain, and at the entrance there is a small cartilaginous eminence termed the *tragus*, on which the hair often grows like the beard of a goat (*Tragus*, the Greek name for goat). The destructive propensity of the caniniferous animal is indicated by this angle, 25 degrees being the proper development of a human being. I have, however, found that this angle gradually increases up to 45 degrees. The angle of murderers I find to increase from 35 to 45

degree, the average being 40 degrees. Now, in the degree that the angle is less than 25 degrees, I find energy of character to decrease in the same ratio. I have met with persons whose angle was not indicated. At the Isle of Man, last summer, I fell in with a family who were on a visit there. The angle of the husband was 11 degrees on the quadrant; that of the wife 18 degrees; they had with them five of their own children—three girls and two boys. The angle of the girls was 9 degrees, and of the boys 7 degrees; and certainly I never before met with so tame and useless a family. They were, in fact, almost totally void of energy and will power; their whole affairs were left to the management of a female servant, whose angle was 25 degrees. I have met with persons with highly-developed mental and moral powers so small in the angle that they were practically destitute of energy to give effect to their higher powers.

. Two gentlemen called upon me some time since with a boy six years old. His head over the ears was not by any means wide; in fact, to have judged by the absurd bumpology system without regard to this angle, destructiveness would have been pronounced small. When I placed my mathematical instrument to his head, I found his angle 38 degrees. I remarked to the gentlemen that the degree of his angle indicated large destructiveness, and that I should expect he would show a tendency to acts of violence. They said that I was perfectly right; that only the day before he had made an attempt on the life of his father, and a few days before that he had made a similar attempt on the lives of his brother and sister. The gentlemen brought the lad to test phrenology, as they conceived that his head indicated small destructiveness. After being fully satisfied upon that point, they requested me to put my instrument to their heads. The angle of the first I tried registered 11 degrees, that of the other 14 degrees. I informed

them that they were wanting in destructiveness, which they admitted. But, said they, we have been told that we had large destructiveness by one who professed to be a practical phrenologist; but our feelings and actions are quite the reverse, as neither of us can bear to inflict pain, or witness it done by others. I told them that I could well understand how the mistake had been made, as they were both wide over the ears, and that width had been taken for destructiveness.

Another remarkable case came under my notice. A lady and gentleman brought a youth, 14 years of age, for my opinion of his natural disposition. I found his angle 40 degrees, the base of the brain large, and the moral region small. I asked if he was their son, and on being informed that he was, I intimated that he had a most dangerous type of head; that he was not a fit subject to be at large, as he was liable to commit crimes of a most heinous character; and that individuals with his type of brain, manifested preference to take life by poison. The father and mother, without hesitation, stated that he had the day before robbed the drawer of £68; that that morning he had made an attempt to poison them; and that they only escaped by an accident, in consequence of the servant letting fall the dish which contained the poison. The dog died shortly after eating the contents of the dish off the floor, which led to an investigation, and it was found that the food contained arsenic, which the boy had procured through two females from a druggist. His head was a similar type to that of Palmer, and his character, so far as it had been developed, strikingly resembled that of that most notorious criminal.

ON THE GEOMETRICAL AND NATURAL LAWS

MODEL GEOMETRICAL HEAD.

Reduced to

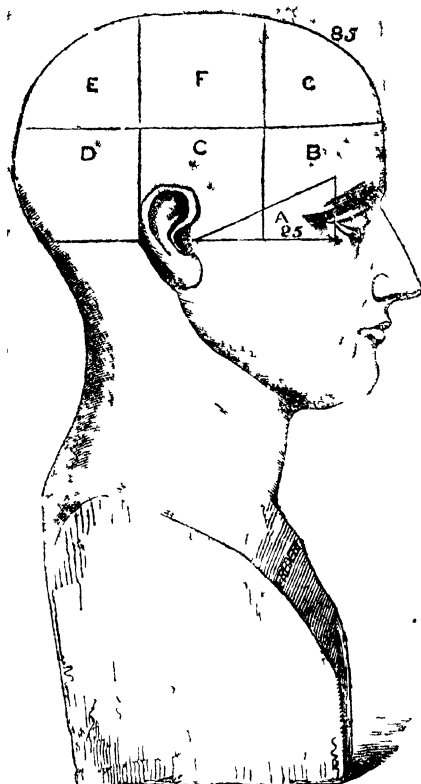


Diagram 8—Side View of the Model Head, divided into Sections

- A The basilar phenometrical angle.
- F The anterior basilar section
- C The middle basilar section
- D The posterior basilar section

- F The posterior coronal section
- C The middle coronal section
- B The anterior coronal section

THE MEASUREMENTS WITH THE PHRENO-PHYSIOMETER.

The basilar phrenometrical angle	25 degrees.
The frontal phrenometrical angle	85 "
The vertical depth of the head, from the opening of the ear to firmness	6 inches.
From the occipital bone to the centre of individuality	9 "
The width of the head over the ears.....	6 "
The vertical depth of the base of the brain, from the opening of the ear to the horizontal line drawn from the centre of ossification of the frontal bone ..	3 "
The vertical depth of the coronal region, from the above line to the top of the head	3 "
The side depth of the anterior sections, from the zygomatic arch to the front of the forehead.....	3 "
The side depth of the middle sections, from the zygomatic arch to the mastoid process	3 "
The side depth of the posterior sections, from the mastoid process to the back of the head	3 "

It will be seen that these proportions are in perfect harmony and constitute an equilibrium. The size of the head as a whole is not the standard by which you are to be guided, but the relative proportion, in geometrical quantities, that one section of the head bears to another. Hence, proportion of brain in position is the rule by which we are guided in estimating its powers, and the real configuration or type will be readily seen by contrast.

The rule by which many persons laying claim to a knowledge of phrenology judge of the moral qualities of a head, is the height of the head from the opening of the ear, whilst they have no means of determining the relative size of the basilar and coronal regions. According to this method of judging, Palmer would have seemed a better man than persons whose moral qualities were of the highest order, but whose heads were less in height than his. For example—Eustache, the benevolent negro, the height of his head, from the opening of the ear,

is the same as that of Palmer's, yet the difference of their characters is a perfect extreme. The merits of one were publicly acknowledged by the Institute of France, from which he received the prize of virtue. During the contest that followed the attempt of the French to restore slavery in St. Domingo, the disinterested exertions of Eustache in behalf of his master, M. Belin, were unbounded. By his courage and devotion he saved the life of his master, and the lives of upwards of 400 other whites, from the general massacre, and he several times preserved the fortunes of M. Belin. At Paris, the profits of his industry, and the rewards he obtained, were all employed in relieving the miserable. At Port-au-Prince he often heard his master, who was an old man, deplore the gradual weakening of his eyes. Eustache could not read, but, inspired with the desire to please his master, he applied himself secretly to study, and took lessons early in the morning, that he might not encroach on the time required for his regular duties. Having acquired the wished-for art, he approached the old man with a book in his hand, and proved to him that, if nothing seems easy to ignorance, few things are impossible to devotion. The character of Eustache is the real "Uncle Tom," as drawn by Mrs. Stowe; in a word he was a true Christian.

Now, let us compare the character of Palmer, who made great professions of religion. His extravagance dated from his childhood. He borrowed money under false pretences from his father's labourers. As an apprentice, he abstracted money from letters entrusted to his care. While walking the hospital—St. Bartholomew's—he committed his first forgery, and dissipated a fortune in riotous living. As a married man, he was notoriously unfaithful to his marriage vow. His wife, his mother-in-law, his brother, four legitimate and three illegitimate children, his confidential associate, and several others, all mysteriously perished. The death of every one of

those persons was a gain to him. He had motives for removing them, and they were removed. Besides these criminal offences, he was guilty of the baseness of accusing his dead wife of forging the name of her mother in law. On the other hand, he was a very civil spoken man. He was a regular attendant at church, he made notes of the sermons, subscribed to charities and missionary objects, and took the sacrament.

We will now compare the outlines of the heads of Lustiche and Palmer, and it will be seen that they show a great contrast as that of their moral character and modes of action.

WILLIAM JAMMITT THE PRISONER

Reduced to 1/2

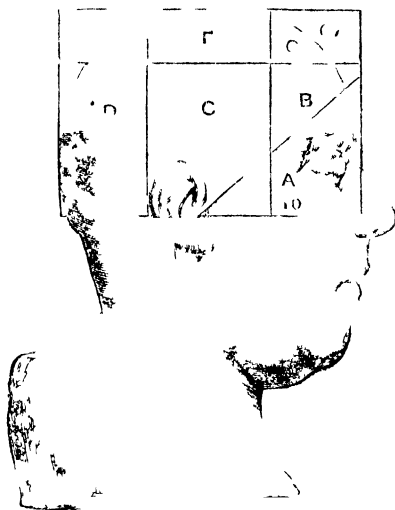
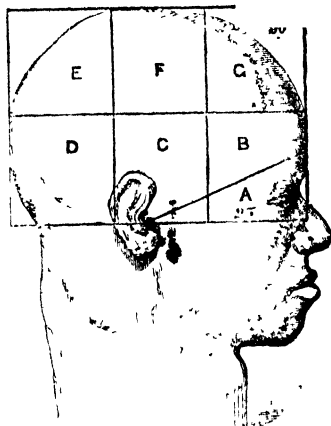


Diagram 2—5 of W. J. J.

We have before remarked that the height of the head of Eustache, from the opening of the ear, is the same as that of Palmer's, but the vertical depth of the basilar region of Eustache measures only 2 5-10 inches, while Palmer's is 4 inches. The vertical depth of the moral region of Eustache is 2 7-10 inches, that of Palmer's 1 2-10 inches; the width of the head of Eustache over the ears 6 inches, that of Palmer's 6 6-10 inches. The basilar phrenometrical angle of Eustache is 25 degrees, that of Palmer 10

EUSTACHE, MORAL TYPE,
Reduced to $\frac{1}{2}$.



side view of Eustache

Palmer was considered by many as a man of intellect, but let us trace his career, and the most miserable want of the reflective powers is visible in every step of his eventful life. There was, however, a popular notion in society about the time of his trial, that he was a remarkably clever man, there cannot be a doubt that he manifested great *perceptive* acuteness, and remarkable cleverness in making use of people to serve his ends; this, however, does not show high-class intellect, but simply low, cunning cleverness, that enabled him to gain a temporary advantage without any regard to ulterior consequences. His career on the turf fully attests that he was a man almost totally void of practical judgment; and the want of talent for tracing the influence of cause and effects on ulterior modes of operation and moral consequences, was fully shown by his complete

GEORGE COMBE,
MENTAL AND MORAL TYPE,
Reduced to $\frac{1}{2}$.

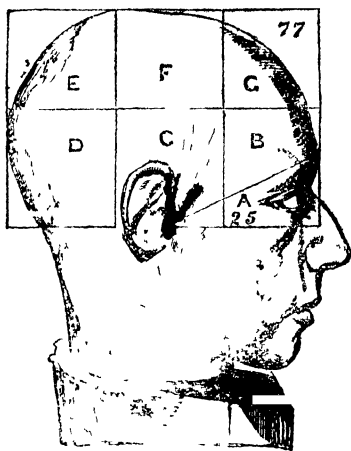


FIGURE III.

Side View of the Head of George Combe.

ties of a high minded, intellectual, and moral philosopher.

The following is that of Dove, executed at York for the murder of his wife by poison. The great deficiency in the mental and moral regions of Dove, *v, r, r, c*, is obvious. The basilar phrenometrical angle, *A*, is 40 degrees, and the depth of the base of the brain 1 inches. The type of this head is that of a low, vicious, almost mental and a moral idiot, who ought not to have been allowed personal liberty. His conduct from childhood was vicious. He delighted in putting into the eyes of animals red-hot wire and vitriol. In fact, his whole career from childhood to the poisoning of his wife was one series of vicious tricks, and was strictly in accordance with the formation of his head. The attempt to prove that

want of conception of the law which regulates moral and physical evidence in relation to crime. Compare the head of Palmer with that of George Combe, and the difference in geometrical configuration and relative quantities in position will be found in exact ratio (all other conditions being equal) to the difference of their mental and moral manifestations. All the manifestations of Palmer were those of a low, unprincipled, selfish, animal existence, while Combe manifested all the quali-

Dove was insane did not succeed. Insanity, as generally understood, is a mode of irrational conduct, caused by a diseased action of the brain. Now, the irrational conduct of Dove was not from a diseased brain, but from its malformation. So, his irrational conduct may be properly termed *idiotic insanity*, in contradistinction to the insanity from diseased action of the brain. This distinction is of great importance in the investigation of cases of insanity, and I feel convinced that had the case of Dove been put in

its true light, he would not have been hanged. It is, however, a lamentable fact that our criminal law does not recognize insanity from malformation of the brain. Now, when an individual commits a crime, and it can be shown that he did it under the influence of a diseased condition of his brain, the law allows him the benefit of its mercy; but when an individual with a malformation of brain commits a crime, he is treated as a rational being, on the ground that he has shown no hallucination of reason, and therefore he is a fit subject for the vengeance of the law. Now, this is one great source of error in the treatment of criminals and their crimes, which has arisen from the fallacious idea that insanity is limited to the

WILLIAM DOVE, THE MURDERER,
Reduced to $\frac{1}{5}$.

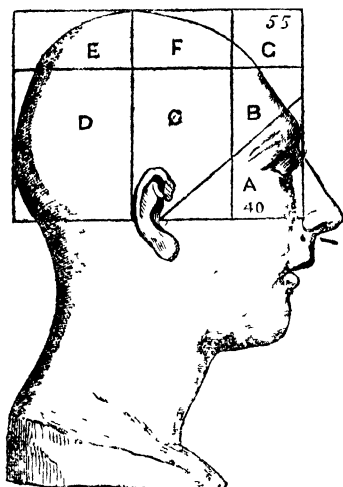


Diagram 13

Side View of William Dove

intellect alone. It is a common remark with regard to the actions of Dove, that he knew what he was doing when he poisoned his wife. No one will dispute the fact; but it should be remembered that he was too low in the reflective organs and the moral sentiments to understand the moral consequences of his actions. The monkey and the dog know when they do wrong, and avoid their master for fear of being punished. But no one for a moment supposes that those animals do so from a knowledge of the moral consequences of their actions. Neither did Dove. he went on step by step from one vicious act to another, with no more idea of moral principle than a dog; yet when his moral insanity gained the climax in the murder of his wife, he was treated as a rational being, and tried for the crime of wilful murder. Evidence was produced in ample abundance to prove that at no period of his life had he been rational, and that the murder of his wife was only one act of scores which he had perpetrated, quite as vicious in nature; notwithstanding all the evidence produced, that poor miserable moral idiot was found guilty, condemned and executed. If ever there was a legal murder, Dove was a victim of it; and his life was sacrificed in blind obedience to a most irrational custom, which has not the least sanction of any rational philosophic principle, being based only upon the brutal doctrine of "blood for blood," which is
• averse to all principles of mental and moral science, and has only the sanction of low, grovelling, debasing, metaphysical superstitions, such as have led men to consign to the dungeon, the faggot, and the gibbet, thousands of poor miserable creatures charged with witchcraft—charged by a class of people who acted under the delusions of a blind, bigoted, metaphysical theology, and this the product of minds too frequently poor in morals, and most limited in intelligence. It is high time that the brutal and disgraceful system of hanging should

have an end. The hanging system shows to what extent society at large is under the dominion of the low, brutish propensities. The taking away of human life is revolting to the moral feelings, and it can only afford gratification to those propensities that we possess in common with the most ferocious of the carnivorous tribes of animals. In fact, the taking of human life has the tendency to render the moral nature of man callous, and to stimulate the most dangerous of his propensities.

The temperament or quality of the constitution of Marley was naturally active, and imparted great energy to the action of his brain. The size of his brain would be about the average volume, but the region of the propensities preponderated in great excess over the region of the moral qualities, as the following measurements with the phreno-phrenometer will show.

The basilar phrenometrical angle, 40 degrees. The depth of the base of the brain from the opening of the ear to the horizontal line drawn from the centre of ossification of the frontal bone, $3\frac{1}{8}$ inches. Depth of the coronal, or moral region, at benevolence, 1 inch. The width of the head over the ears, $6\frac{1}{8}$ inches. The above

ROBERT MARLEY,

WHO MURDERED COLE IN LONDON,

Reduced to $\frac{1}{2}$.

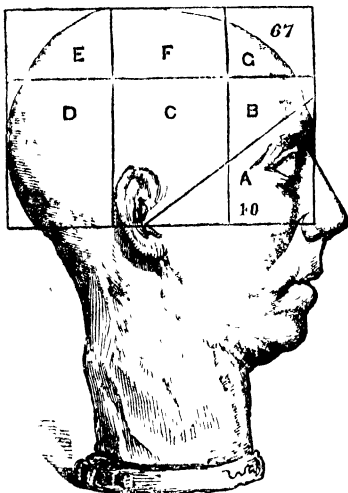


Diagram 13

View of Robert Marley

quantities show a frightful excess of the lower propensities over the higher faculties. That these proportions may be better understood, contrast them with those of diagram 10.

In the head of Marley the organs of firmness, self-esteem, and destructiveness are very large; while the organs of conscientiousness and benevolence are very small. The great danger of individuals with heads of Marley's type is in the great excess of the propensities over the moral faculties; Marley's large self-esteem and firmness gave a positive action to the propensities which rendered him regardless of consequences in his deeds of crime.

The ticket-of-leave system may have features to recommend it, and there cannot be a doubt that its promoters are well-intentioned persons; but the present method of granting tickets of leave to criminals affords no protection to society that the individuals permitted to go at large are not of the dangerous criminal class. To grant tickets of leave to men with the low and dangerous type of brain of Marley, is an experiment that can lay no claim to prudence, whatever it may do to benevolence. There can be no excuse as to the difficulty of deciding whether an individual is of the dangerous class of criminals or not, because the means are now so simple and the method so exact, that the question can be determined with as much certainty and readiness as the simplest problem in geometry.

With a proper system of classification, people of Marley's type would not be allowed their liberty, as they cannot be prevented, in a state of freedom, from committing crimes. Spolm, who was tried for the murder of Mr. Little, at Dublin, had the perfect murderer's type of brain, as seen by the diagrams of his head in the account of my interviews with him—see "*Characteristics of James Spolm.*" Had the police authorities understood my system of phrenology, they

would have been able at once to have detected in Spollin the type of brain capable of doing the murder, and this might have given the clue, so that a strict eye might be kept upon his movements. It is only persons with a certain type of brain who commit murders, and so long as individuals are allowed at large with this type, we shall have murders. It would, therefore, be an act of mercy, as well as policy, to keep such individuals in a position where there is no temptation to lead them to acts of atrocity.

The case of Dr. Smethurst has called forth much discussion. Now, if he murdered Miss Banks, the type of his brain is that of the murderer's; because it would have been as impossible for him to commit the deed without the disposition for that purpose, as for the sheep to manifest the ferocity of the tiger, or the dove that of the vulture. Criminal action, moral action, and mental action, can only be developed in conformity with the law of the fitness of things;—hence the type of brain and its conditions will in all cases bear a direct relation to the act done, for nature proclaims that it cannot be otherwise.

The contrast between the configuration of the skull of Spurzheim and that of the Chimpanzee, or Black Monkey, and the difference of the geometrical quantities in position in the various sections are very striking. The basilar phrenometrical angle is 45 degrees in the Chimpanzee and 25 degrees in Spurzheim.*

* It is a remarkable fact that the type of the brain of the murderer is very similar to that of the Chimpanzee. Those qualities of brain that would determine the characteristics of a proper human brain are wanting in the brain of the Chimpanzee and that of the murderer. It is, therefore, obvious that the brain of the murderer does not range higher than that of the brute, and therefore will be found in strict accordance—yet, the unfortunate individual with his malformation of brain is only deemed a fit subject for extermination. What will future generations think of our boasted intelligence and civilization, when they learn that the criminal law has persons who were moral lunatics, caused by a malformation of brain.

SKULL OF
THE BLACK MONKEY,
Reduced to $\frac{1}{5}$.

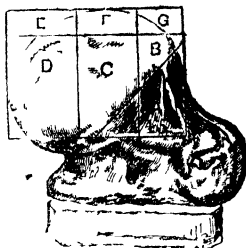


Diagram 11

GREENACRE MURDERER,
Reduced to $\frac{1}{5}$.

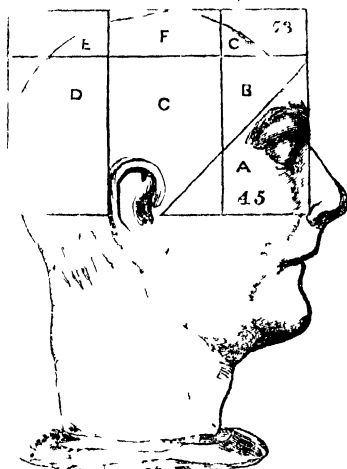


Diagram 12—Side View of Greenacre

SKULL OF DR. SPURZHEIM,
Reduced to $\frac{1}{5}$.

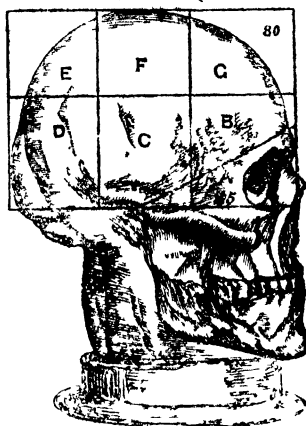


Diagram 13

This diagram of the head of Greenacre shows that the basilar phrenometrical angle is at the same degree as that of the Chimpanzee, and the geometrical quantities of the various sections are very similar. The formation of the head of Palmer is very similar to that of the Chimpanzee. — (See diagram 9.)

COURVOISIER,
MURDERER OF LORD WILLIAM RUSSELL,
Reduced to $\frac{1}{3}$.

In Courvoisier, the murderer of Lord William Russell, the basilar phreno-metrical angle is 40 degrees; the base of the brain very deep and wide; and the region of the moral sentiments very small, being conical. This is a most dangerous criminal type, and it is high time that society should have the means of protecting itself against the atrocities of this class of individuals.

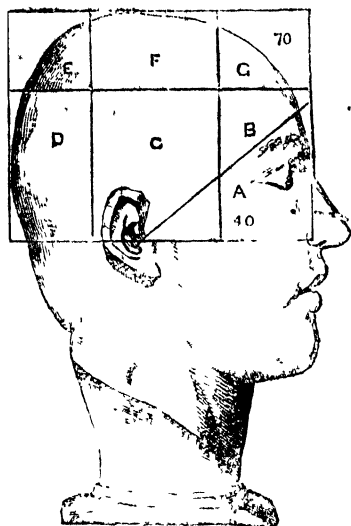


Diagram 17
Side View of Courvoisier.

In the eighth part of the "*Drawing Room Portrait Gallery*," of the "*Illustrated News of the World*," there is a portrait of Napoleon III, from a photograph. Now, this likeness indicates many remarkable features and traits of character, but there is one in particular that corroborates a feature which I first saw in his portrait on the prize medal given at the Paris Exhibition, and the same feature is clearly marked in all the portraits I have seen of him. The likeness is almost a front view, and it shows that the opening of the ear is very low; being almost on a line with the bottom of the nose, thus indicating

that the basilar phreno-metrical angle is at the least 40 degrees. On reference to diagram 19 in "*Phrenology made Practical*,"—a front view of the head of Palmer—it will be seen that the opening of the ear is in a similar position to that of Napoleon's; contrast these with diagram 27 (in the same work) of the front view of Mr. George Combe, which indicates the basilar phreno-metrical angle at 25 degrees, and the difference will be seen at a glance.

The type of the head of Napoleon III is one of those in which all the lower propensities are greatly in excess of the higher faculties. Had his portrait been laid before me, without knowing whom it represented, I should at once have concluded that a man with such a head and face would not stop at any thing to accomplish his selfish, ambitious ends. The low position of the ear shows that the destructive propensity is very large, and the deep subtlety expressed in the half-closed eye and stolid face, indicate qualities capable of a very dangerous range of action, rendered more potent by his highly marked mental qualities. The formation of the eye is similar to that of the fox, and it is singularly characteristic of low cunning.

Men of this stamp ever show a restless desire to grasp at power, and they regard nothing sacred that stands in their way. Every means that cunning can devise is resorted to for the purpose of gaining their ends, whilst their modes of action are indirect and round about, appearing to have a different aim from that which they really have. They appear "all things to all men," and flatter themselves that all their movements are impenetrable. They appear to take a pleasure in strategy and finesse, and in mystifying and deceiving. They are reserved, never open nor explicit. Their movements are stealthy, voice soft, the eye side-long, eye-lids half closed, and are fond of prying into the affairs of others. They make great professions of their intentions, and will assume any garb

to cloak their purpose so long as it suits them. They generally lay their plans so well that it is almost impossible to discover their deep and comprehensive designs. Shakspeare has drawn this kind of character in his *Iago*, and also Richard the Third, who is made to say to himself—

'Why, I can smile, and murder while I smile,
And cry content to that which grieves my heart;
And wet my cheeks with artificial tears;
And frame my face to all occasions.'

It is a sad calamity when men of this type are placed in a position that gives them power, owing to their being deficient in those moral qualities which are necessary for the formation of a good and useful life. The history of the world and the peace of nations bear ample testimony of ill-regulated ambition and unscrupulous doings of clever and gifted men, in whom nature had implanted excellent mental abilities, but left them scantily furnished with the moral feelings. Had the moral feelings of such men been equal to their intellect, how differently would the history of a Napoleon, a Caesar, or a Nicholas have been written? Instead of being traced through blood and carnage, the ashes of sacked and burnt villages and towns, and all the miseries that fill the catalogue of human woes, it would have beamed with the light of love to mankind, and formed an epoch in the moral and social advancement of humanity. I have in my possession a profile portrait of the son of Napoleon I, by Sir Thomas Lawrence, and it is a remarkable fact, that the opening of the ear is placed in relation to the eye-brow at an angle of 40 degrees, the same as in those of Palmer and Napoleon III. It is said that Sir Thomas stated that he felt he was bound by a moral duty to draw every line as he saw it in nature, and that he never took more pains in being correct than he did with this portrait. Now, the conception of this child was at a time when all the

brute passions of his father were stimulated to the highest degree of excitement, and it appears that he transmitted to his son a type of brain in accordance. The propensities of the father were greatly in excess of the moral feelings, and the extraordinary animal energy with which he was endowed fired up all the brute passions of his nature to a pitch of action which rendered their manifestations ungovernable. Hence, the extreme violence of his temper, the rage evinced whenever his plans were thwarted, or any obstruction crossed his path. When his orders, however difficult of execution, were not at once and fully obeyed, his wrath knew no bounds, nor would he listen to any apology or excuse, however reasonable.—See “*Criminal, Crimes, and their Governing Laws*,” by the author. In the fifth part of the “*Drawing Room Portrait Gallery*,” there is a portrait of Marshal Pelissier, from a photograph by Mayall, and it is remarkable to see how faithful nature is to herself. The head and face show strong traits of character, but I am sorry to say that not one trait indicates the least expression of moral feeling. The ear is placed at an angle of about 45 degrees in relation to the eye-brow, which shows that the destructive propensity is enormous; *and the form and expression of the eyes and face show the most relentless ferocity.* His burning of the Arabs in the cave of Kantara is quite in keeping with such a portraiture, as the following extract from his memoir shows—“That dreadful deed commenced on the morning of the 18th of June, 1845. Pelissier ordered burning fagots to be thrown into the interior of the cave. A terrific conflagration soon arose, which the French troops, with lighted torches in their hands, kept up, throwing, without rest, new combustible materials into the sea of flames. All day and all night the fire raged, when, in the morning, a few Arabs, half scorched, rushed through the flames, and, throwing themselves at the feet of Pelissier, offered submission on honorable terms, which was rejected,

and without further parleying, they turned with wounded pride back into the cavern of terrors, resolving to die there. At noon, on the same day, Pelissier again ordered the fire to be relighted. The flames again hissed round the rocks; but, loud as was the roar of the fire, above all were heard the cries of the dying Arabs. After eighteen hours, their cries gradually became weaker and weaker; and when the next morning dawned, all was quiet and silent in the cave. Pelissier ordered the fire to be extinguished, and a company of soldiers entered the cave, when a shocking spectacle met the eye. In the foreground some five hundred corpses, many of them burnt to cinders, strewed the ground; while in the deeper recesses of the cavern other corpses stood upright and stiff against the rocky walls, their faces buried, as if seeking there a cooling breath. Many were found with fearful gashes, still covered with blood, which showed that there had been horrible struggles among the dying men. About seventy Arabs who still gave signs of life, were carried into the open air, but almost all of them expired soon after. From seven to eight hundred people are said to have perished on this occasion." The head and face of Pelissier, and this account, with other doings of his past life, are most instructive studies,—indeed, the "*Drawing Room Portrait Gallery*," is an invaluable work for the study of the heads and faces of the most noted men and women of the day; and a valuable and instructive analysis might be written of the peculiar characteristics of each of them, for there are portraits delineated which strikingly contrast with each other, and range from the lowest animality, the most silly vanity, to the most exalted of the mental and moral qualities.



Diagram 18 — An Illustration of the ideal Head of Christ.

The above illustration is from a photograph taken from a bust, representing the head of Christ. There may be persons who deem it a want of due reverence to place this representation in conjunction with those of the most degraded criminals. But a moment's reflection will convince them that no irreverence could be intended. It is given in this work for the purpose of illustrating a great fact. to demonstrate, that in proportion as the head goes higher and higher in the development of the mental and moral regions, the natural capability for mental and moral manifestation increases in the same ratio, *all other conditions being equal*. The artist who modelled this representation of the head of Christ, to

doubt took nature for his guide, copying from the heads of persons who were in the habit of manifesting the most exalted of the Christian virtues. It will be observed that this illustration approaches the type of the model head; and it is not the less remarkable that the heads of those persons who practise the most exalted of the Christian virtues, and are a law unto themselves, invariably approach this type.



Diagram 19.—Cardinal Wiseman.

“This is said to be an excellent profile. It shows a large development of the perceptive organs, which impart a ready talent for dealing with things and events; but owing to the reflective powers being so much less in relative size to the perceptives, such heads take a contracted view of the relation

and bearing of facts and events, and of their development in ulterior modes of operation, and they are apt to build theories with regard to the social and political state of the world upon mere coincidents and metaphysical fictions, totally disregarding the fact, that the social and political conditions of every state of society throughout the world are governed by natural laws, as immutable in their operations as the laws which govern every department of the globe on which we live. Hence, they become sophists and special pleaders for states of things that have been but are no longer necessary to the wants of humanity."

This description of Cardinal Wiseman was published in "*Phrenology made Practical*," in July, 1857, and his late begging letter to raise money to force the temporal government of the Pope upon the people of Italy, is a remarkable corroboration of the truth of those remarks. The contrast of this head with that of Christ may be studied with profit by the deluded admirers of such men.

The despotic form of government is incompatible with true civilization, and more particularly that form of it which the Cardinal so anxiously wishes to force upon the Italians. From time to time he has had much to say respecting the progress of civilization, but all that he has said only proves that he does not understand the question in its wide bearings on the social elevation of humanity.

If we wish to know the stage of civilization reached by a people, let us ascertain whether they are obeying the divine laws which govern the organization of man, and the external circumstances which influence his conduct; whether they have acquired the important knowledge of the connection between them and their own happiness. Civilization is not to be measured merely by the amount of luxury, by the increased accumulation of comforts, or by the numerous victories achieved by science. No; the great test of civilization is the

progress made by a people in social science;—in those refinements of social intercourse resulting from moral and intellectual improvement, and in the inculcating and obeying of those laws and those principles which tend to elevate the many and not the few, and embrace in their fullest scope every circumstance calculated to impart the greatest amount of happiness and freedom.

But the most confused and wild speculations will continue to be advanced in politics so long as social questions are treated by the theological and metaphysical methods, which allow a preponderance of imagination over observation. We see that the political spirit of the age is marked by a disposition to exercise an illimitable power over human nature, just as though it could bend it as it wished, and work miracles. Such was the case in every department of science a few years ago, and men were long in learning the extent of man's power of modifying phenomena. In the infancy of science they believed themselves capable of exerting an unbounded influence over the phenomena which it exhibited. But this happened at a period when they had the least power over phenomena from ignorance of their laws. They placed their confidence in the influence of supernatural agents or mysterious forces supposed to be inherent in all they saw; and in proportion as the delusion was protracted the advancement of science was hindered and consequently true power limited.

We see statesmen and politicians still acting under the delusion that social phenomena can be modified at will, and that the human race is always ready to yield to any influence of the legislature, spiritual or temporal, provided it is invested with sufficient authority. It is not difficult to perceive that true social science would not be acceptable to such politicians, because it must impose limits on political action by dissipating for ever the pretension of governing at will social phenomena,

and setting at nought all law but their own caprice. We can recognise in this delusion the chief cause of the social disturbance which now exists ; for the human race finds itself delivered over without method or logical protection to the ill-regulated experimentation of the various political schools in Europe and America ; and we shall find that there is no chance of order and agreement, but in dealing with social phenomena, as with the phenomena of physical science in accordance with the unvarying laws of nature ; in other words, introducing into the study of social phenomena the same scientific spirit which has regenerated other branches of human speculation.

ORDER I GENUS 1.—FEELINGS, OR AFFECTIVE PROPENSITIES.

THE organs of the brain are classified into two orders—the feelings, and the intellect : these are again divided into two genera—the feelings, into propensities and sentiments, and the intellect, into the perceptive and the reflective faculties.

This class of organs may be described as those feelings which give rise to emotions or affections which neither know nor reason, being mere blind impulses, and unless governed by intellect are apt to run into gross abuses.

Thus Acquisitiveness, without mental and moral guidance, would lead to the most unprincipled avariciousness ; Destructiveness to wanton wreck and cruelty ; Veneration to the worship of unworthy objects, Self-esteem to inordinate pride, and Love of Approbation to ridiculous vanity.

1. AMATIVENESS.

THIS organ is the cerebellum or little brain. To learn the situation of Amativeness, feel on the middle line, towards the base of the skull at the back part of the head, and you will find a small bony projection named the occipital process.

Below that point, and between the mastoid process, the organ is situated. The size of the organ is indicated by the extension of the occipital swellings backward from the mastoid process, and downward from the occipital spinal process. When it is large the neck at these parts between the ears is thick, and gives great peripheral or round expansions to the nape of the neck, from the mastoid process backward.

The function or use of this organ is to manifest the sexual feeling. There is no phrenological organ of more importance, or which has so powerful an influence upon character and happiness, or the bearings and relations of which are more extensive. In males, it becomes nearly double in size between the age of ten and twenty: the feelings and emotions during this time undergo a corresponding change.

This organ is excessively large in Palmer and Rush, and they were both notorious for their indulgence in gross sensuality.

2. PHILOPROGENITIVENESS.

For the locality of this organ, let the reader feel along the middle line at the back part of the head towards the base of the skull, and he will find a small bony projection; below this point lies the organ of Amativeness, immediately above it and on each side of the middle line lies this organ. When large it gives to this part of the head a drooping appearance, and projects backward from the ear. In fact, the size of this, as well as all the organs in the posterior region, can only be determined by the width of the back part of the head in this region, and the projection backward from the ear. We frequently meet with persons in whom this backward projection is comparatively small, yet they have been told that Philoprogenitiveness and other organs in this region were large, simply because prominences were marked in the location of this and other organs.

The function of this organ bestows the love of offspring and children in general. It is the largest in the female; and this law holds good in the lower animals as well as in the human race.

Boys, as a rule, exhibit little of it; the case is different with girls, who show its activity in their fondness for dolls, and in their desire to carry children in their arms even when they can scarcely stand under their weight.

When this organ is small there will be great indifference to children. A mother so constituted finds the rearing of her children a toil rather than a pleasure, and unless her Conscientiousness and good sense be great she will be apt to neglect them. A woman little endowed with this organ will not make a good nurse for children. Women who commit infanticide have generally a small development.

The natural language of philoprogenitiveness, when predominantly active, is to throw the head back. Mothers who have this organ large and active, may be observed to kiss and fondle their infants, press them to their bosom, and then throw their heads back. Painters have noticed this natural expression, for the great Italian painters in their representations of the Murder of the Innocents, place the bereft mothers with their heads thrown back, and extreme agony depicted on their countenances. This organ is frequently abused, and people pamper and spoil children instead of training them rationally; hence their children become pert, noisy, unmannerly and self-willed.

3. INHABITIVENESS.

This organ is situated immediately above Philoprogenitiveness, and its size is estimated by the same rule as that of the latter organ—that is, by the distance backward from a line drawn upward from the mastoid process, and the width in the locality of the organ. The function of this propensity is to prompt its possessor to fix upon some particular spot for a residence.

This organ is found large in those persons who are fond of home, and cannot bear the idea of leaving their homes even under the most pressing necessity. I have met with many, particularly females, who had such an extreme aversion to leaving home, that even when on a visit to their friends, they became home-sick in a few days, and nothing but returning home would relieve them of the wretched state of mind under which they laboured. In my rambles in North America I have met with emigrants almost from every country in Europe labouring under the influence of home-sickness, and many of them manifested perfect horror at the idea that they should never again see the "home" of their childhood," or then "native home." Inhabitiveness I found large in all such cases.

The "Lines on the Iron-bound Bucket" are a striking illustration of the function of this organ.

"How dear to my heart are the scenes of my childhood,
 When fond recollection recalls them to view,
 The orchard, the meadow, the deep tangled wild wood,
 And every loved spot which my infancy knew,
 The wide-spreading pond, and the mill that stood by it,
 The bridge and the rock where the cataract fell,
 The cot of my father—the dairy-house nigh it,
 And e'en the rude bucket that hung in the well
 That old oaken bucket,
 That iron-bound bucket,
 That moss-covered bucket that hung in the well

4. CONCENTRATIVENESS.

This organ lies immediately above Inhabitiveness and below Self-esteem. Its size is estimated by the fulness in the region of the organ, and the distance backward from the vertical line drawn from the mastoid process. Sometimes, at the joining of the occipital bone with the parietal bones, a projecting ridge is found; but this must not mislead as to the size of the faculty.

The function of this organ is the desire or power to concen-

trate the mind ⁱupon itself, and keep its efforts combined on one subject or object till examined in all its relations. Firmness produces fixity of purpose; Concentrativeness continuity of impressions, whether feelings or ideas. Persons who have a large endowment of this organ are not apt to be distracted from what they are engaged in by the intrusion of extraneous ideas. But the organ in excess is apt to lead to a morbid dwelling on internal ideas and emotions. Many who have it small are remarkable for great volatility of manner, and extreme difficulty in directing their minds for a length of time to one subject: they are continually flying from topic to topic, and find it almost impossible to pursue a continued train of investigation. Scatter-brained, flighty people are all low in this organ. Good abilities may however exist with great deficiency of it; but in such cases they are deprived of much of their usefulness.

5. ADHESIVENESS. (Old No. 4.)

This organ is situated on each side of Concentrativeness; and it is that portion of the brain that produces attachment to individuals, and prompts to social compacts. Some ~~have~~ attempted to explain the existence of society by supposing that man early perceived the necessity of unity for the mutual assistance of each other. But a reference to the natural history of the lower animals proves, beyond doubt, that social communities depend upon a distinct propensity.

The manifestations of this organ may be noticed in the conduct of those around us. It is generally much stronger in females than males; for women love with all their soul, and frequently act more from feeling than reflection. There is a pureness and self-devotedness in the affections of women, however unworthy the object may be, that often astonishes those who are differently organized, and ~~who~~ regard it as madness or infatuation.

The natural language of this organ is indicated by the tendency to turn the head in the direction of the organ towards the object to whom we are attached. Young girls may be seen coming from school with their arms thrown over each other's neck, and the sides of the head meeting just at the seat of the organ. We may frequently notice the incline of the head mutually in the same way in two lovers walking arm-in-arm. When the dog or cat is under the influence of this organ, and wants to show its attachment, it will rub the seat of this organ against its master's leg. Persons in whom it is large, give the hand a hearty shake on meeting with a friend: those in whom it is small hardly press the hand at all. Absent friends are ever present with those in whom this organ is large, they think of them with warm affection. When it is small, out of sight, out of mind.

6. MARRIAGE.

DR. GALL supposed that attachment, and attachment for life, were distinct faculties. Spurzheim thought them to be modifications of the same faculty. Dr. Vimont, however, thinks that he has proved Gall's view to be the correct one, and considers that the region which he ascribes to Philoprogenitiveness is composed of two organs—love of young in the middle, and on each side attachment for life, or the organ of Marriage.

I have found this organ generally small in the Mormons, or "Latter-Day Saints." In some, however, I have found it highly developed; but they state that, though Mormons, they would not have more than one wife each. Nothing can be more obvious than the fact of the human invention of the Mormon's theory of marriage, because it is in decided opposition to the works of the Creator. God has implanted in our nature a faculty that bears a relation to the institution of marriage, with as much directness as those which prompt the love of progeny and friendship. Hence, polygamy has its basis

in metaphysical fiction, and leads to wild, sensual delusions, containing within themselves the elements of their own destruction.

7. COMBATIVENESS. (Old No. 5.)

THIS organ is situated at the posterior inferior angle of the parietal bones. It will be more easily traced in an individual by observing the top of the ear and passing the hand from behind the ear towards the organ of Adhesiveness. When large it gives great fulness to this region of the head, and elongation behind the ears. A vertical line drawn from the mastoid process will be found a good guide in forming an estimate of the size of this organ. If large there is great space occupied before we pass round the back part of the head, giving great squareness and breadth. When the organ is small the head will be narrow from side to side in the region behind the vertical line from the mastoid process, and very little space backward.

It may be called the organ of courage, as it is by this organ we resist and overcome danger and opposition. The combative man loves to contend, and meets opposition fearlessly. The statues of the gladiators display a bulging out in the seat of this organ, proving that the ancients recognized great courage to exist in combination with a particular form of brain; or that the artists copied nature so minutely that their works are illustrations of a natural law.

For many years I have made professional pugilists a study, and have invariably found that those who were most noted for brute courage had a configuration of brain of a special type. The interest manifested in the late fight between Tom Sayers and Heenan, shows that brute courage has a great number of admirers. When Sayers visited Liverpool after his fight, in a scientific point of view I felt anxious to see whether he came up to the true zoological rank of the professional fighting man.

Tom Sayers's development shows how faithful nature is to herself, not only in the formation of his brain, but in that of his physical system. His temperament shows a close, compact, dense, tough, enduring, elastic organization; no way bulky, but indicating that compactness and texture of muscle which so distinguish the fine compact muscle of the racehorse from that of the draught horse. Indeed, his physiological characteristics show mingled vivacity and capability for continued exertion. His complexion is very uncommon except amongst the gypsies; it is a kind of red-olive colour. The expression of his features is lively, showing animal vivacity; the eye quick and keen; but there is nothing of the mental expression in his face. The formation of his head is strikingly marked. The base of the brain is very large, the ear low set, and the brute propensities in great excess over the moral feelings. It is narrow in the regions of the reflective faculties and ideality, and gradually goes wider backward to combativeness, and rises high in the region of firmness, self-esteem, and love of approbation. Indeed, his very large combativeness, self-esteem, love of approbation, and firmness, give pluck and bull-dog courage, and the ambition to be the most distinguished in the display of those qualities.

The peculiar courage displayed by Sayers appears to be much admired by persons in all ranks of life, but a moment's reflection will show that the courage he manifested in the late fight was nothing more than the same kind of pluck and courage which is displayed by the bulldog and game cock. There was nothing moral in it, because those qualities of the mind that distinguish a human being from the brute are averse to all such conflicts.

The natural language of this organ is to throw the head backward, and on one side, as seen in the attitude of boxers and gladiators.

8. DESTRUCTIVENESS. (Old No. 6.)

THIS organ is situated immediately above the external opening of the ear, and extends a little backward and forward. Its size can only be correctly estimated by the width of the head over the ears, and the degree of the angle from the eye to the opening of the ear, explained at Diagram 13. The organ of Destructiveness rests on the base of the skull, and I frequently find it large in individuals whose heads are not above an average width over the ears. In such cases, I have found the basilar phreno-metrical angle ranging from 30 to 45 degrees. I have before remarked, that I have found that the average of this angle is about 25 degrees in both men and women.

The convolution of the brain which has been considered Destructiveness, is between Secretiveness and the convolution which I find to be at the base of the brain which is the destructive propensity. I almost meet daily with individuals whose basilar phreno-metrical angle is not more than 15 degrees, yet whose heads are wide over the ears, and they invariably have great horror at taking life in any shape, and could not bear to witness torture; but I found them, generally, extremely sensitive with regard to their own life and health.

The organ is found large in all carnivorous animals, and I find that they have the same form of brain in the region of this organ that I find in murderers. As the basilar phreno-metrical angle in the human head advances from 15 degrees, I have observed that earnestness and energy of character have increased in a similar ratio. I have found by long experience, that an angle of 25 degrees is sufficient for all useful purposes of life. It appears that the legitimate use of this organ is to prompt us to kill for food, and to impart energy of action; and that those individuals who commit murder have a development of the destructive propensity similar to what we find in the brain of carnivorous animals.

The natural language of Destructiveness cannot be misunderstood: the scowling brow, the inverted eye, the teeth closed, and the lips half opened, the face livid, and the nostrils distortedly distended, all these show the signs of the savage man.

9. PRESERVATIVENESS.

THIS organ is situated between Secretiveness and Destructiveness. It appears that the design of the Creator in bestowing this organ was to prompt us to preserve our bodies from injury and destruction. The first manifestation of this organ displays itself in the cries of the new-born infant. No propensity is more universally manifested than this and Alimentativeness, and none so essential to the preservation of our existence.— See "*Phrenology made Practical.*"

10. ALIMENTATIVENESS.

THE function of this organ is the instinct that leads to the selection of food, and prompts us to take nourishment. It is situate in front of the ear, forming a continuation of the organs of Preservativeness and Destructiveness, and extending downward to the opening of the ear. When the organ is small, the head is hollow immediately above the zygomatic arch, when large it is broad, and frequently projecting beyond the cheek bones. The seat of this organ is covered by muscles; hence, allowance must be made for that, and a careful examination as to the thickness of these muscles should be made. A few well marked instances of the development and appearance of the organ will enable the student easily to recognise it when large or small.

We frequently meet with individuals who are not remarkably wide before the ears, still this organ is large; but in such cases the largeness is indicated by the eyes being pushed upward and outward, which may be frequently noticed in the

glutton and the epicure. The organ was remarkably large in Rush, and his strict order to be provided with sucking pig and apple sauce during his trial was a striking illustration of its powerful influence. It was also large in Palmer: his appetite never failed to the last, and he showed less anxiety about his terrible position than he did for his supper.

11. ACQUISITIVENESS. (Old No. 8.)

THIS organ is situated immediately in front of Secretiveness and below Sublimity. It was originally termed the organ of Covetousness, and has since been changed to the name of Acquisitiveness. It leads to a desire for accumulation or gain. The objects of Acquisitiveness may be various; in one money, in another paintings, in a third books, &c. It is that organ which, in the inferior animals, induces them to lay up for winter, and a proper development is essential to diligence in any calling. When very powerful, there is an inordinate lust after riches. The person becomes a miser: the whole aim of his life is to hoard; and the loss of money he regards as the greatest of misfortunes. So strong is this feeling, that many persons, though wallowing in wealth, scarcely allow themselves the common necessities of life.

When Conscientiousness is deficient, it tends to fraud and theft. If placed in unfavorable circumstances, it is hardly possible for a person, with such an organization, to be otherwise than a thief.

Children with this organ large show a strong desire to hoard at a very early period; and if Secretiveness be also large, they manifest remarkable cunning in obtaining the object of their desire. In many families great merit is awarded to those children who excel in the propensity to hoard, and premiums are held out to those who save the most money. The selfish feelings being thus schooled from infancy, parents need not be

astonished at their children being thieves and liars —because they have been practically trained to view selfishness as the cardinal virtue.

To train children to habits of prudence and economy, under the guidance of enlightened moral feelings, is a very different state of things to training them to be grasping, hoarding misers, and low cunning tricksters.

12. SECRETIVENESS. (Old No. 7.)

This organ is situated exactly above Preservativeness. When the latter is large it may be taken for Secretiveness by the inexperienced observer. In like manner, Secretiveness and Acquisitiveness are frequently confounded with Id ality. But if a horizontal line be drawn from the centre of ossification of the frontal bone to the back of the head, no such mistake can arise.

The function of the organ is to produce an instinctive tendency to conceal the various thoughts, emotion, and desires, that arise in the mind, until judged of by the understanding. It gives a prudence to the character, by imposing a restraint upon the other faculties, and serves as a defence against prying curiosity. It enables man and animals to avoid the assaults of enemies, when they are unable to repel them by force. In writing, it leads to irony, and, combined with humorousness, to sly jokes. When this organ is very energetic, and not regulated by strong intellect and moral feeling, it will give rise to cunning instead of prudence, and may lead to the practice of lying and deceit, and, combined with Acquisitiveness, to theft. It supplies the cunning necessary for this latter avocation. When it is very feeble, there is a want of tact about the individual in his intercourse with society; his thoughts and emotions are expressed without the least regard to time, place, or circumstances. Indeed, he cannot adapt, or

experiences the greatest difficulty in adapting, the former to the latter.

GENUS II.—SENTIMENTS COMMON TO MAN WITH THE LOWER ANIMALS.

THESE faculties, like those which we have already considered, do not form specific ideas, but produce merely a Sentiment; that is a propensity, joined with an emotion or feeling of a certain kind. Several of them, viz. Self-esteem, Love of Approbation, Cautiousness, and Benevolence, are common to man with the lower animals; all the others are peculiar to man.

18. CAUTIOUSNESS. (Old No. 12.)

THIS organ is situated near the middle of the parietal bone, between Love of Approbation and Secretiveness. It produces circumspection, and prompts to look round about, cautiously guarding against danger. When large it gives great width to the back part of the sides of the head. By looking on the top of the head the broad and extended shape of the sides of the back part given by large Cautiousness will be readily perceived. It is generally highly marked in the heads of children; and we recommend particular attention to observing in their heads the exact position and shape of this organ, that its size and shape may become familiar to the eye and hand. A few points well understood in this way lessen the difficulties, and give much certainty in a more general and extended manipulation.

When the organ is very large it produces a doubting, wavering disposition, and in many instances absolute incapacity for vigorous and decided conduct: the mind is in a state of constant apprehension, and the individual never decides on the most trivial concerns without unnecessarily extended consideration. It is powerfully excited by sudden and imminent danger, and individuals become panic-stricken from violent excitement.

This organ is small in Palmer, (see diagram 20 in *Phren-*

ology made Practical,") and the reckless career which he led from his boyhood to his death affords striking illustrations of his great want of the faculty of circumspection.

14. LOVE OF APPROBATION. (Old No. 11.)

THIS organ is situated on each side of Self-esteem. When large, it displays great fulness and breadth in the upper and back part of the head. It is the organ which inspires us with a desire for the good opinion of others. When fully developed, and under the influence of the moral powers, it is highly useful, and is productive of very many advantages. When very large, and not thus influenced, it produces ambition, envy, and excessive vanity, and will make its possessors the easy dupes of flatterers.

Mr. Combe calls this feeling the drill-master of society; and in this capacity it leads to acts of moral tendency. Ill-feeling and selfishness are restrained to please others. How many of the lists to charitable institutions are filled up by love of approbation; but if good is really done in the present state of society, we must not be too fastidious about the motive. It is impossible to calculate how much of the vice and misery pervading all classes, is owing to a wrong direction given to this faculty, by those who have the care and teaching of children. Even in infancy we find mothers exciting vanity in the child, by praising baby's fine cap, or pretty face. At school, envy in all its forms is encouraged, and a first place can only be obtained by the degradation of a schoolfellow. The present prize system at schools sows the seed of envy, hatred, and uncharitableness.

When this organ is excessive, it craves for compliments, is led by fashion, and ever asks, before adopting a course of conduct, what will the world think of it. "What will Mrs. Grundy say?"

The natural language of this organ is to carry the head backwards, and a little to the side; and it gives a graceful rolling motion to the head and body when walking, and imparts a pleasing tone to the voice. *

15. SELF-ESTEEM. (Old No. 10.)

This organ is situated at the back of the head immediately above Concentrativeness, and behind Firmness. It produces self-love in general. It inspires the mind with a degree of confidence in its own powers, and, when combined with superior sentiments, gives a dignity and greatness to the character. When largely developed, and not regulated by the higher powers, it manifests itself in arrogance, pride, conceit, or egotism. Combined with very large Love of Approbation, it gives rise to envy; and if not directed by Benevolence and Conscientiousness, to a delight in exposing others' faults, and endeavouring to make them appear ridiculous or despicable.

The results of a small development, are modesty, and humility of demeanour. The person thinks little of himself, however admirable his merits, and is perfectly free from presumption. Such persons are great favourites with those who have much self-esteem. There is no collision of feeling between them--the humble mind unconsciously giving way to the proud one; and thus affording it gratification.

The natural language of this organ is manifested in erect body--the head and shoulders drawn a little backward. It gives a stiffness and directness in the gait and carriage--the expression of the face is fixed and hard--the lips closed and somewhat extended--the voice is solemn--the enunciation slow and distinct--the whole deportment dignified and stately, often mingled with reserve.

GENUS 3—THE SUPERIOR SENTIMENTS.

WE shall now treat of what are termed the Superior Sentiments, such as constitute the moral governing qualities in the human character. The coronal region, or the upper part of the brain, is the seat of these sentiments. The only certain rule by which the size of the organs in this region can be correctly estimated is the following:—Draw a horizontal line from the centre of ossification of the frontal bone backward, which will correspond to about the centre of Causality and the centre of Cautiousness; all that part of the head which lies above this line belongs to the moral sentiments, allowing a little for Cautiousness and a little for Causality. If the part which lies above the horizontal line be low, and flat, and short from the front to the back of the boundary line, as well as narrow from side to side over the top of the head, you may rest assured that the moral sentiments are small; if it be high and broad and long above the horizontal line, you may be certain that they are large.

16. BENEVOLENCE. (Old No. 13.)

THIS organ is situated at the fore-part of the top of the head on each side of the middle line, and anterior to the fontanelle, or what is commonly called the opening of the head, and extends downward to the top of the forehead.

Where this organ is largely developed, there will be no luxury sweeter than that of doing good. Liberality will invariably characterise its possessors, and they will feel the full force of that declaration “that it is more blessed to give than it is to receive.” Some children, where it is large, have been known to give all their sweetmeats and toys to others, and never seem so happy as when they are distributing around, even to the last portion of what they may possess. The story of the Good Samaritan is a fine specimen of benevolent feeling.

In Christ's Sermon on the Mount we have a sublime emanation of blended benevolence and conscientiousness. Where the organ is **very large**, with deficient Cautiousness and Acquisitiveness, it may lead to the most unwarrantable and imprudent acts of generosity.

When this organ is small, the mind will generally be narrow and contracted, and self will absorb every feeling and monopolise the whole attention, and there will be the greatest indifference to the good of others. When small, and Destructiveness large, it will be difficult for those so gifted to be either amiable or useful members of society.

Small Benevolence does not produce cruelty, but leads to regardlessness to the welfare of others, a powerful restraint, however, is removed from the propensities when this organ is deficient.

We must not look for the activity of this organ merely in bestowing alms or giving money: many give money to save themselves trouble, who are perfectly destitute of that benevolence which prompts to real acts of kindness and soothing sympathy. Palmer was known to give money to grooms, ostlers, chambermaids, and waitresses, and to subscribe to charities and missionary objects, yet he could coolly witness, day after day, the dying agonies of his poor wife caused by his own hand, and the terrible death-pangs of his victim Cook, without pity or compassion. Palmer's benevolence was like his religion, of which he made great show.

17. VENERATION. (Old No. 11)

This organ is situated at the centre of the coronal region behind Benevolence. Dr. Gall, when at school, observed a great difference among children, some being pious and others quite the reverse. Gall's father had ten children, one of whom was devout from childhood, and wished to become a

priest. He was, however, put to business, but at the age of twenty-three he abandoned it, and took orders for the priesthood. Dr. Gall was intended for the church, but having no partiality for it, he left it for the study of medicine. This led him to believe that the religious sentiment was innate. He noticed the heads of religious people, and found the region of this organ prominent. It was remarkably so in his brother, and also in the antique statues and portraits of eminent saints and high priests. He entered the churches, and saw the same marks in the greatest devotees. This organ produces the sentiment of reverence, and veneration in general. It is the feeling which prompts to worship. If the understanding be limited, and no revelation has reached the individual, the unfortunate being may worship stocks, stones, and even brutes. We frequently meet with persons who express doubt as to the stability of religion. But the organs of Veneration, Wonder, and Hope are implanted in the human brain, and correspond with sentiments in the mind which neither arguments nor ridicule can extinguish. Religion can never be extinguished, or even endangered, so long as these sentiments are in the mind, particular theological doctrines, which, at one time fashionable, may subsequently fall into decay, but veneration and adoration will animate the human soul so long as the race of men exists.

Some say that Phrenology is hostile to religion. How that can be we are at a loss to perceive, as it is the first system of mental philosophy that has recognised an innate faculty producing a tendency to adore.

The natural language of Veneration is indicated by the peculiar lowering of the eyelids, and bowing of the head. This manifestation may be observed in the Sisters of Mercy, as they pass through the streets of many of our large towns.

18. FIRMNESS. (Old No 15)

THIS organ is situated between Veneration and Self-esteem. Its size must be estimated by the same rule as that of Benevolence—that is, by the height above the horizontal line drawn from the centre of ossification of the frontal bone. It gives firmness of purpose and resolution. Firmness has no relation to external objects, it only adds a positive quality to the manifestations of the other organs of the brain. Thus to Combativeness it imparts determined bravery, to Conscientiousness inflexible integrity. When Firmness is predominantly active it produces obstinacy and stubbornness, and its manifestation may be observed in stubborn, untractable children.

The importance of this organ in the formation of character, cannot be overated. Without a due endowment of perseverance nothing can be accomplished. Many individuals succeed, not from superiority of mental and physical qualities, but from the steadiness with which they pursue an object. It is important to distinguish, however, between the manifestations of firmness and the gratification of the large organs. An individual with predominant propensities will persevere in gratifying them, whether he has the organ of firmness or not. He may be persevering in one pursuit and vacillating in another. Firmness conduces to perseverance, but it does not alone produce it, except in government, or where the influence of others is to be overcome.

The natural language of this organ is indicated by an extremely firm, upright gait, as though an iron rod went from it through the spine.

19. CONSCIENTIOUSNESS. (Old No. 16.)

THIS organ is situated on each side of Firmness and immediately before Love of Approbation. When well developed it rises high above the horizontal line drawn from the centre

of ossification of the frontal bone, and the shape of the head over the top, above Cautiousness, is round and high—when small, the head slopes off from Firmness. If Firmness be also small, this part of the head is flat, and there is little, if any, above the horizontal line. The function of this organ is the sentiment of the sense of moral obligation, which produces the feeling of duty or of obligation, independently of fear of reward, or any extrinsic motive.

This organ controls and regulates all the others. If Acquisitiveness prompts too keenly, Conscientiousness reminds us of the rights of others. It permits defence, but reminds, too active Combativeness and Destructiveness that malicious aggression cannot be allowed. If Benevolence tends toward profusion, it reminds us to “be just before being generous.” It brings all the faculties to the standard of duty, and gives directness of purpose in the fulfilment of obligations.

This organ is extremely small in the head of Palmer, (as may be observed in the back view, diagram 20, in “*Phrenology made Practical*,”) and all his actions through life show that he was totally devoid of the feeling. From his earliest boyhood he was addicted to falsehood and fraud. No one ever placed confidence in him, without being deceived. He robbed his employer and cheated his companions.

20. HOPE. (Old No. 17.)

This organ is situated before Conscientiousness, on each side of Veneration. Its name sufficiently defines its function, which is the earnest expectation of what appears good and desirable. It induces us to take gay and pleasant views of the future, and keeps up our spirits in the midst of misfortune: “though clouds lower around us, we are cheered with the expectation of speedy sunshine. Mungo Park in his desolate sojournings in Africa, and Sir John Ross in his miserable Polar

solitude of four years, must have been powerfully supported by the influence of this organ. One of Ross's men died of sheer despondency, which would not have happened had he possessed the sentiment in vigour. The strong hope of a reprieve has sustained the spirits of malefactors till within an hour of their being brought upon the scaffold. It is the province of hope to gild an object, until it becomes fascinating, and then to anticipate its enjoyment. The full development of this organ is necessary for the true enjoyment of life, and to the comforts arising from a blessed hope of immortality. Though such may be called to drink of affliction's bitter cup, yet this motto will never be lost sight of, "Never despair." A person having this organ small is prone to despondency. He never takes cheering views of the future, and is surprised when anything lucky occurs. People of this turn of mind are seldom disappointed, which is the only good that ever results from moderate Hope.

21. IMITATION.

This organ is situated on each side of Benevolence. To ascertain its size correctly, mark the distance above the centre of ossification of the frontal bone. When small, the head slopes suddenly down from Benevolence.

When we reflect on the multiplicity of ideas which are acquired by children, without any kind of direct tuition, we must conclude that there is an innate faculty of imitation, which acts with more or less natural energy, and educates itself from an inherent impulse. Imitation may be exerted by all the feelings and sentiments; and we may perceive, however indispensable this faculty is, it is liable to abuse, unless controlled by a well-balanced brain, or early regulated by education.

From the natural tendency of this organ, it might be designated the "mimic power," as it is the faculty which gives to children a language of natural expression, long before

they acquire the least knowledge of artificial sounds or verbal language, and in this manner they comprehend certain physiological signs even when they do not understand the words which orally represent them; as, for example, the nod of the head, as an approval, and the shake of the head as disapproval. They also distinguish the frown of anger, and the smile of approbation, as they intuitively shrink back at the exhibition of the former, and are attracted by the pleasing impressions of the latter.

In children this organ is particularly active, hence the importance of surrounding them with associates, and setting them examples, worthy of imitation. The sphere of activity of this faculty is so very extensive that were we to enlarge on the several portions of it, and give directions for its education in all the combinations of which it is capable, it would require a volume of itself. Almost all the actions of life require its exercise.

22. MARVELLOUSNESS. (Old No. 18)

This organ is situated in front of Hope, between Imitation and Ideality.

Dr. Gall observed that individuals pretended to be visited by apparitions of persons dead or absent, and hold conversations with them. "Are they impostors," said he, "or does this depend on cerebral organization?"

He studied the history of men remarkable for this quality—such as Swedenborg, Tasso, and Socrates. He examined and compared the heads of others, and found a prominence between Ideality and Imitation. Whenever an individual fell in his way of the credulous class, he examined his head, and found the disposition invariably associated with this development. It is the foundation of curiosity and credulity, admiration and astonishment. This sentiment has been a marked feature in

mankind in every age, both among savages and civilized nations. It influences our ideas in matters of religion in a much more powerful degree than that of veneration. The belief in things invisible is not the result of reason, but of the feeling produced by this organ, and observation testifies that even in infancy there is much natural difference in this respect, some children being credulous, whilst others evince an early scepticism, and frequently those opposite extremes may be found in the same family.

In every age man has been led by credulity and superstition. The founders of all nations have had a fabulous origin ascribed to them, and in all countries marvellous traditions and marvellous stories occur in ample abundance. To the undue influence of this organ may be attributed the success of religious imposters, who succeed in imposing themselves upon the public as supernatural personages, and in proportion to the marvellous extravagance in which they clothe their doctrine, does their influence extend over those in whom this faculty predominates.

To the ignorance of the operations of nature, may be traced the misguided worship of polytheism, and even some of the ancient philosophers used to speak of a soul in every thing, owing to want of information on the principles of attraction, and the laws of chemistry, magnetism, and electricity. It is this belief in invisible causes which has induced the poets to personify every part of animate and inanimate nature, which the following lines from Wordsworth beautifully illustrates.—

“ For every form of being is assigned
 An active principle, howe’er removed
 From sense and observation, it subsists
 In all things, in all nature, in stars
 Of azure heaven, the unending clouds,
 In flower and tree, and every pebbly stone
 That paves the brook, the stationary rock,
 The moving waters, and the invisible air ”

The spirit-rapping delusion of our own time is one of those sympathetic infatuations that infect a certain class of minds. I have made a study of a large number of these people, and found the types of their heads as strikingly marked, as those who believe in ghosts, omens, fortune-telling, and the delusions of religious impostors. In both England and America, numbers have been at considerable trouble to convince me of the truth of spirit-rapping, but as yet, I have not been able to come to any other conclusion than that they are victims of delusion. The records of history bear ample testimony of the fact, that, in all ages, a certain class of minds have been the willing dupes of superstition and imposture.

The natural language of this organ gives a peculiar expression to the face. The mouth gaping open, expressive of awe or wonder, the eyes turned up, the hands elevated, and the whole body more or less thrown into an attitude of disorder foreign to the calm regularity which results from reflection. It imparts a certain wild expression to the look, which becomes habitual to those constantly under its influence.

23. HUMOROUSNESS. (Old No. 20)

This organ is situated by the side of Causality, and immediately before Ideality. Dr. Gall says that the best idea he can give of its functions is to say, that it is the distinguishing faculty of Rabelais, Cervantes, Boileau, Racine, Swift, Sterne, and Voltaire. When excessively developed it is attended with the disposition to view things in a ludicrous light.

This organ produces great amusement, and a love for fun and drollery, and a disposition to say humorous things on all occasions, without regard to time or place. Rabelais joked on his death-bed, and Sir Thomas More on the scaffold. It was large in the Rev. Sidney Smith, and is strongly marked in the head of Mr. Charles Dickens.

When this organ is small the person has a natural dislike to drollery, and considers those who deal in it buffoons. He hates absurdity and everything that does not accord with his notions of common sense.

21. IDEALITY. (Old No. 19.)

THIS organ is on the side of the head above the temples. Above it are Marvellousness and Hope. To correctly estimate its size we must be guided by the height and width of the head in this region, above the horizontal line drawn from the centre of ossification of the frontal bone. Many heads are wide at the temples who are small in Ideality. Large Acquisitiveness and a thick temporal muscle are frequently mistaken for Ideality.

The function of Ideality is to produce the feeling of beauty and perfection; to elevate and imbue every idea conceived by the mind to the height of sublimity. It seems indispensable to poets; and the most distinguished of them have possessed large developments of it, as in Tasso, Milton, Shakspeare, Wordsworth, Byron, &c. It inspires with enthusiasm, and prompts to embellishment and splendid conceptions. It must be possessed by the painter, sculptor, and all who cultivate the fine arts. A good endowment of it elevates and expands the other feelings and conceptions, directs them to higher objects than those which would be sufficient to gratify themselves, and thus gives a constant tendency to, and capacity for refinement. A great deficiency of it leaves the mind in a state of homeliness or simplicity, varying its appearances according to the other faculties which predominate in the individual. The organ is larger in civilized than in savage nations; in the European, for example, than in the Negro, American Indian, and New Hollander. It is a remarkable fact that Ideality is invariably deficient in low, debased criminals.

25. SUBLIMITY.

THIS organ is situated immediately behind Ideality, and when large there is great width and height above the horizontal line, as in Ideality. It will be remembered that the function of Ideality produces the feeling for the beautiful, the lovely, and perfection. The function of Sublimity produces the feeling for the vast, the illimitable and omnipotent, and derives pleasure from mountain scenery, tempests, vast and magnificent prospects.

THE NERVES OF THE EXTERNAL SENSES.

By means of these nerves the mind is brought in direct relation with the external world, and they are the inlets of all impressions from without. They have been limited to five, namely, Feeling or Touch, Taste, Smell, Hearing, and Sight: but Sir Charles Bell has shown that certain nerves are distributed to the muscles, and that they constitute the sixth sense, that of mechanical resistance.

To ascertain the size of the intellectual organs is a matter of great importance. The anterior lobe of the brain rests on the superorbital plate, (the bone which forms the roof to the eyes,) and terminates at its posterior edge. To ascertain the lateral or side depth of the anterior lobe, draw a vertical line from the centre of the zygomatic arch, as seen on diagram 7. All before the vertical line is the seat of intellect. When you have a skull before you, nothing can be more easy than to determine the point from which to draw the vertical line. In the living head it is not more difficult. First place the head in a position, so that the axis of the eye is parallel with the horizon, then with the front of the fingers determine the centre of the zygomatic arch, from which draw upwards along the side of the head the vertical line: then ascertain the breadth and the height from the eyebrow to the upper edge of Causality;

and mark whether the perceptive organs or the reflective are most developed: the perceptive give the power of observation, the others of reflection.

ORDER II.—INTELLECTUAL FACULTIES.

GENUS 1—THE PERCEPTIVE, OR KNOWING FACULTIES

Intellectual Faculties, which take cognizance of the existence of external objects and their physical qualities as transmitted through the nerves of the external senses.

26. INDIVIDUALITY. (Old No. 22.)

THIS organ is situated at the lower part of the forehead, immediately above the top of the nose. When large it produces breadth, projection, and descent between the eyebrows. When small the eyebrows approach closely and in a horizontal line. The cavity called the frontal sinus rises over this organ, and extends in some heads over Form, Size, Weight and Locality. Before twelve years old this cavity does not exist. To distinguish between external appearances produced by a large development of the frontal sinus and those indicating large development of organs:—in the first they present an abrupt and ridgy development; in the second they present a rounder swell, and it follows the direction of the organs marked out on the busts.

This faculty gives us the notion of substance, and forms the class of ideas represented by substantive nouns: as tree, man, house, horse, bird, &c. It gives aptitude for observing and remembering objects, and the capacity for detail in regard to objects that exist; and, therefore, is necessary in the natural sciences—as Geology, Botany, Zoology. &c. The ancient physiognomists remarked, that their great men were full at the top of the nose, and all their busts or portraits that have

come down to us show them to have been large in Individuality. I have never yet seen a great general, mechanic, or naturalist, who was small in this organ.

27. FORM. (Old No. 23.)

This organ is situated on each side of the Christigalli—a small bone behind the top of the nose. When large it gives width between the eyes, as may be seen in artists who are eminent for portraiture. When deficient, the width across the nose from eye to eye is small. By the lateral depth, and the distance between the eyes, we judge of the size of this organ.

Form is the organ which takes cognizance of configuration generally. It is essential to portrait painters, and greatly aids the naturalist. to it and Individuality Cuvier owed much of his success as a comparative anatomist.

28. SIZE. (Old No. 24.)

This organ is situated at the inner corner of the eye, on the side of Individuality. The faculty of distinguishing size differs from that of distinguishing form. It gives the idea of space, and the dimensions of objects and of the space which they occupy. It also takes cognizance of the law of the proportion of distance, or perspective, and perceives extension, distance, space, and magnitude of bodies, which are recognized by Individuality. As the perception of perspective depends on Size principally, it is accordingly necessary in landscape painting. Some artists are so deficient in this organ that they cannot draw in perspective, and the proportions in their pictures are always more or less faulty. It gives what is commonly called a good eye for estimating correctly distance and proportion in general. It is a most important faculty to geometers, civil and military engineers, artists, architects, land-surveyors, and generals. In games, such as billiards, bowls, &c., it is of

great importance in assisting to give precision and skill in judging of distance.

29. WEIGHT. (Old No. 25.)

THIS organ is situated about one-third of the extent of the superciliary ridge from the nose. Sometimes the eyebrow is forced up by it, but most frequently it is indicated by a downward depression of the eyebrow in the position of the organ.

This faculty gives the idea of ponderosity of bodies—of mechanical forces and resistance. Bodies may be of all forms, sizes, and colours, and yet none of these features would imply that one was heavier than the other. It is clear, too, that we have an instinctive faculty which leads us to put forth muscular effort proportionate to the resistance to be overcome. It is probably to this organ that the nerves of mechanical resistance convey the idea of the state of the muscles.

30. COLOUR. (Old No. 26.)

THIS organ is situated in the middle of the eyebrow, between the organs of Weight and Order. When large it gives an arched projecting appearance to the eyebrow. It should be recollected that the organ of which we are now treating is not confined to the superciliary, but extends a short distance above it. This organ perceives colours. When it is large, this perception is extremely vivid. There is a love of colours for their own sake, and a remarkable power of minutely discriminating their nicest shades. Combined with Ideality, it gives a just and delicate perception of colours. When it is small, a difficulty is experienced in perceiving and distinguishing colours, and in appreciating their harmony. Such cases are often met with, and arise from a defective size of this part of the brain.

GENUS 2 — INTELLECTUAL FACULTIES WHICH TAKE COGNIZANCE OF THE RELATIONS OF EXTERNAL OBJECTS.

31. ORDER. (Old No. 29.)

THIS organ is situated at the outer part of the eyebrow, between Number and Colour. It produces the instinctive love of method and the proper arrangement of things. Those persons in whom it is large manifest great uneasiness at seeing anything out of its proper place or in a state of confusion. When the organ is very large there is great fastidiousness about the manner in which things are placed, and the order in which they are done ; which is frequently the cause of unnecessary and painful inconvenience. Methodical arrangement is not less annoying to those in whom this faculty is feeble, than the want of it is to those in whom it is large.

This organ is confined to physical arrangement, or Order, or method in relation to physical objects. Classification, generalization, and systematizing in science and philosophy, depend on the reflective faculties. Such authors as Cuvier and Linnæus were indebted to Causality and Comparison, and not to Order, for their great power of classification.

32. NUMBER. (Old No. 28.)

THIS organ is situated at the external angle of the eye, and when large swells out the frontal bone at that particular spot. In some instances its size is indicated by an overhanging and drooping appearance at the outer extremity of the eyebrow, as seen in the likeness of Rowland Hill, in "*Phrenology made Practical*," which represents a large development of the organ, and he is distinguished for great arithmetical talents.

33. EVENTUALITY. (Old No. 30.)

THIS organ is situated in the centre of the forehead, above Individuality and below Comparison. It is the faculty which takes cognizance of action, and change. Individuality concerns

itself with what exists; Eventuality with what happens. When we say the man runs, the noun springs from Individuality, and the verb from Eventuality.

As soon as any action, or any event whatever, takes place, this faculty takes cognizance of it: such as the horse gallops—the house falls—the army retreats—the king abdicates: in all these phrases the action done calls up Eventuality. And if we consider all history, whether sacred, political, or social, as well as the history of the sciences, we find that they are records of what has been done to certain existences or nouns. This is a most important faculty, as it not only perceives the events, but remembers them, and keeps them, as it were, in a store-house, to be called up when required, by the other faculties. It is the foundation of the talent for relating events, narratives, anecdotes, and histories. It is found large in all good historians. Persons who have this organ very large have a great craving to know everything which is going on, and, with Secretiveness small, and Language large, they have equally as great a craving to divulge it—and are too fond of talking of the affairs of their neighbours.

34. LOCALITY OR DIRECTION. (Old No. 27.)

THIS organ is situated on each side of Individuality. It enables us to perceive direction, and gives great facility when large of recollecting places, and learning geography. It is this faculty; Individuality, and Size, that enable the Indian to travel through the forests with such wonderful accuracy. He keeps a map of the country in his head, and a chart of his course. The organ was large in Mungo Park, and he had such a passion for travelling that he left his profession and his native country to penetrate into the interior of Africa. It is large in the busts and portraits of Columbus, Captain Cook, Galileo, and Newton.

Persons largely endowed with Locality, Individuality, and

Size are delighted with descriptions of natural scenery, such as are found in the works of Sir Walter Scott.

35. TIME. (Old No. 31.)

THIS organ is situated in the middle region of the forehead, on each side of Eventuality. It gives rise to the perception of duration of the relation in which circumstances stand to each other chronologically. It also gives the perception of measured cadences, and is one source of pleasure in dancing. It is necessary to music and versification.

Many young people who are low in this organ, while learning music, find it difficult to play in correct time; and I have known many to abandon the study of music, owing, as they have stated to me, to their inability to learn to play in time.

The deaf and dumb frequently manifest this faculty, and they may be taught to dance correctly, by observing the motions of others who beat the time.

36. TUNE. (Old No. 32.)

THIS organ is situated between Time and Constructiveness, under and on each side of the temporal ridge. When large the forehead is filled up and rounded off in this region. Gall discovered this organ, by noticing it large in a young girl, who could repeat whatever she heard sung or played, and who recollected whole concerts if she heard them only twice;—and by afterwards examining the heads of all persons distinguished for musical talent to whom he could gain access.

No organ is better established than Tune, but to discriminate its size with accuracy will be found somewhat difficult, except in cases of extreme development or deficiency, and mistakes are frequently made in estimating it.

37. CONSTRUCTIVENESS. (Old No. 9.)

THE organ is situated before Acquisitiveness, and behind and above the outer angle of the eye. In the brain it occupies the posterior part of the anterior lobe. Dr. Gall discovered it by

noticing that men distinguished for mechanical genius were large in the locality of this organ. The temporal muscle covers Constructiveness, and differs in thickness in different persons. Its thickness may be estimated in the living head by feeling at the muscle while the individual moves his lower jaw in biting.

This organ has hitherto been classed with the lower faculties. Its function is to construct, which employs the power of action. It is one of the mental powers that we possess in common with the lower animals—such as Tune, Time, Individuality, Locality, &c.

The function of this organ produces the desire to construct, or the ability to fashion, by putting materials together, as in buildings and making machines, or by carving out, as in sculpture, modelling, &c., or any of the processes discovered by the other intellectual faculties, as in drawing and painting. It does not invent, though it stimulates the other mental powers to invent what will employ it agreeably in constructing. It takes its direction from the other organs.

38. LANGUAGE. (Old No. 13.)

THIS organ is situated on the back part of the orbitary plates, the bones which form a roof to the eyes and support the anterior lobes of the brain. A large development of this organ is indicated by a prominence or depression of the eyes, which is produced by a portion of the brain which lies at the back part of the orbitary plate pressing it and the eyes more or less forward and downward, according to the size of the convolution. When small the eye is deeply sunk into the skull.

This faculty takes cognizance of artificial signs, by which we represent ideas: the ideas are given by the other faculties, and thus gives signs only. Form gives the idea of configuration, as an oval, a circle, or a square. Language supplies the word or sound by which we are enabled to call up the idea in the minds of others.

This faculty gives verbal memory; and persons who have it large readily remember words, and learn by heart with great facility.

GENUS 3 — REFLECTIVE FACULTIES.

THESE powers constitute what is called reason. They compare one thing with another, and trace the relation subsisting between effects and their causes.

39. COMPARISON. (Old No. 31.)

THIS organ is situated in the middle of the upper region of the forehead, immediately above Eventuality. When prominent it gives to this region a rounded fulness.

Comparison discovers analogies, resemblances, and differences. We have an organ which compares tunes; one which compares colours: it may be asked, what need is there, then, of a distinct order of Comparison? It must be understood that Comparison compares things of different natures, and combines the result of the other faculties harmoniously. Almost every object or subject which can occupy the mind belongs to a class to which it bears more or less analogy; and it is the function of this faculty to compare all our perceptions together, and trace their resemblances and differences, and the classification to which they belong. If a new object is presented to us, Comparison immediately compares it with what we know, in order to find the class to which it belongs. Persons in whom this organ is large will trace resemblances between objects or events, which would entirely elude the notice of others with a smaller endowment.

40. CAUSALITY. (Old No. 35.)

THIS organ is situated on the upper part of the forehead, on each side of Comparison. It is the faculty which traces out the causes of things, and the connection which subsists between causes and effects. Individuality makes us acquainted with

objects. Eventuality with events and occurrences. Comparison points out their identity, analogy, or difference. Causality gives the idea of connection, in reference to cause and effect. Everything in existence is more or less intimately related to every other thing, and when the relation of one thing to another is such, that it always must precede it, it is said to be its cause; and that which is thus preceded, is called an effect; this may, in its turn, become a cause, and produce another effect, and so on to infinity, constituting a chain of causes and effects. It is the function of Causality to trace the relation among phenomena which constitute cause and effect. It is the possession of this faculty which gives man such an immense superiority over the brutes. When it is small, facts are not generally considered as having a necessary dependence and connection, however obvious such dependence and connection may be to those in whom this organ is large. Such facts will be considered as curious coincidences by those in whom it is small.

The reflective powers were low in Palmer, and the manifestation of this defect was shown in his want of practical judgment. In Dove they were extremely small—and he was, in consequence, an idiot in these qualities.

When Causality is large and too active, persons attempt to explain everything without the support of any sound data, or they draw inferences from single facts and have a tendency to metaphysical speculations, and endeavour to penetrate things that must remain unknown to man in this life, such as the origin, nature and end of things, the nature of God, the state of the soul hereafter. When we wander thus far we must believe, but we cannot know.

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